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OF THE

INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY

UNDER DIRECTION OF THE COUNCIL

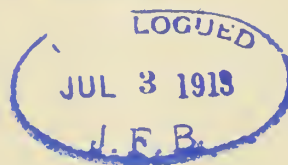
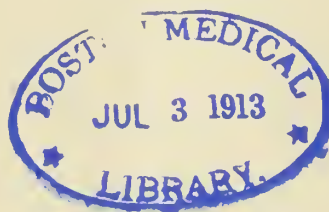
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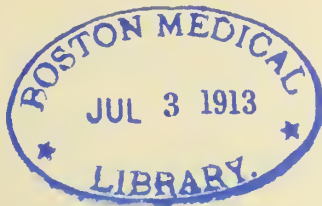
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JANUARY TO DECEMBER, 1910





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ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

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VOLUME III

FORT WAYNE, IND., JANUARY 15, 1910

NUMBER 1

ORIGINAL ARTICLES

SOME FACTS CONCERNING DIPHTHERIA REVEALED BY LABORATORY EXAMINATIONS.

J. P. SIMONDS, M.D.

Superintendent Bacteriological Laboratory of Indiana State Board of Health.

During the year ending Oct. 31, 1909, 1,445 throat cultures were examined at the Bacteriological Laboratory of the State Board of Health. Of these 426, or 29.4 per cent., contained diphtheria bacilli. Only 25 of these cultures were from school inspection cases. An analysis of the results of these examinations and the clinical and other data supplied by the physicians reveals some interesting facts concerning this disease.

Unlike specimens containing tubercle bacilli, the number of which fluctuates only very slightly from month to month, cultures containing diphtheria bacilli show very marked seasonal variation. The number of positive cultures received during the vacation period is remarkably small—an average of 11 per month, as compared with an average of 48 per month for the remainder of the year.

An analysis of 374 positive cases in which the age was given, shows that 250, or 66.8 per cent., were in the kindergarten and grammar school ages of 4 to 15. The percentage of cases occurring during this period of life is not surprising, when one considers that the conditions are so favorable for the spread of the disease. The crowding of pupils into poorly ventilated school rooms facilitates the transmission of diphtheria bacilli from one child to another, and the very large number of enlarged tonsils among children furnishes these organisms the most fertile soil imaginable.

But it is a mistake to consider diphtheria an exceedingly rare disease among adults. Of the 374 cases, 51, or 13.6 per cent., were over 21 years of age. Six were above 40, one being 80 years old. Had cultures been taken from the sore throats of adults in the same proportion as from children, the percentage of positive results among grown persons would undoubtedly have been much larger.

That only a small per cent. of patients give a definite history of exposure, is shown by an analysis of 862 cases in which information on this point was given by the physician. These include only first cultures made for diagnosis and none for release from quarantine. Of the 862 cases, 309 were positive and 553 negative. In only 70 (22.6 per cent.) of the 309 positive cases was there a definite history of exposure. In 87 (28.1 per cent.) there had been no known exposure, but diphtheria was present in the community. In 152, or practically 50 per cent. of the positive cases, no possible source of infection could be discovered.

This fact raises the question of healthy diphtheria bacilli carriers. For it was probably from this source that the majority of the 152 cases got their infection. It has long been a matter of common knowledge among laboratory workers that persons may carry diphtheria bacilli in their throats without showing the slightest symptom of the disease, and that from such a carrier another person may contract a very virulent and even fatal form of diphtheria. But it is necessary every now and then to remind the practitioner of the truth of this statement, for it is he who must hear the complaints and get the abuse from the healthy man forced to undergo the inconveniences of quarantine.

Thirty-seven throat cultures in this series taken for diagnosis were found to contain diphtheria bacilli, although there was neither membrane nor exudate present. Of these, 17 were from males and 20 from females. Twenty-one of the patients (57 per cent.) were between 7 and 15 years of age, although the ages in this group of cases varied from 1 to 80 years. This number of cases is too small to warrant any very definite conclusions being drawn. However, they strongly suggest that the children in public schools, so many of whom have chronic pathological throat conditions, form the majority of "healthy" diphtheria bacilli-carriers and play a most important rôle in spreading the disease.

Parke and Beebe¹ examined the throats of 330 healthy persons who had had no direct contact with diphtheria patients and found diphtheria bacilli in 8 (2 per cent.), only 2 of whom later developed the disease. They also found diphtheria bacilli in 50 per cent. of insufficiently isolated sisters of diphtheria patients. Thure Hellstrom² reports an epidemic of diphtheria among the soldiers in the Svea life guard in Stockholm in which the throats of 786 soldiers were examined. Of these, 151, or 19.2 per cent., showed diphtheria bacilli, although none of them had an exudate in the throat. Westbrook, Wilson, McDaniel and Adair³ examined 478 children in a school in which there was an epidemic of diphtheria. They found diphtheria bacilli present in the throats of 172, although only 68 showed any symptoms of the disease.

On the other hand, Beck⁴ examined 66 and Fibiger⁵ 82 healthy children without a single positive result.

Loeffler,⁶ at the Charité in Berlin, found that the more carefully healthy cases were selected in regard to their relation to diphtheria patients, the less frequently were they found positive. Hence, it would seem that the conclusions of the "Committee of the Massachusetts Association of Boards of Health" are sufficiently correct for practical purposes. "In urban communities, at least 1 to 2 per cent. of well persons among the general public are infected with diphtheria bacilli, and where persons are exposed to diphtheria, as in families, schools or institutions where cases exist, the number infected is much larger and may range from 8 to 50 per cent."

The records of this laboratory in regard to the length of time diphtheria bacilli may persist

in the throat after recovery from the disease, are not of much value. This is due chiefly to the relatively small number of second cultures received for release from quarantine. In 36 cases diphtheria bacilli were still present as follows:

After 6-10 days in	6 cases
After 11-15 days in	10 cases
After 16-20 days in	10 cases
After 21-25 days in	3 cases
After 26-30 days in	4 cases
After 41-45 days in	2 cases
After 58 days in	1 case
	<hr/> 36

Tjaden⁷ studied 1,338 positive cases in Bremen and found 67 per cent. were free from bacilli after two weeks, 75 per cent. after three weeks, 84 per cent. after four weeks, 93.4 per cent. after six weeks. He found that diphtheria bacilli disappeared more rapidly from the throats of persons over 14 years of age than from those of younger children. Thus, six weeks after an attack of diphtheria, bacilli were found in 3.5 to 3.8 per cent. of patients under 14, and in only 0.7 per cent. of those above that age.

It is important to remember also that the bacilli persist as often and as long in individuals who have been given antitoxin, whether for curative or prophylactic purposes, as in those to whom it was not given. The antitoxin neither hastens nor retards their disappearance from the throat; it merely produces passive immunity to their toxins. The bacilli must be gotten rid of by other means.

The above facts lend force to Biehn's⁸ statement that "the severity of the disease bears no relation to the duration of infection and an arbitrary time limit of quarantine is not justifiable."

That it is not safe for a physician to depend solely on the appearance of the throat for diagnosis, is shown by an analysis of 883⁹ first cultures in this series. The results are shown in the following table:

TABLE SHOWING THE RELATION OF THE CLINICAL TO THE BACTERIOLOGICAL DIAGNOSIS.

Clinical Diagnosis.	Bacteriological Diagnosis—		Total.
	Positive.	Negative.	
Diphtheria	162	139	301
Not Diphtheria	88	247	335
Doubtful	71	176	247
Total	321	562	883

From this table it is seen that the physician made a positive diagnosis of diphtheria in 301 cases, while bacteriological examination revealed the organisms in only 162, or 53.8 per cent. In 335 cases in which the doctor pronounced the condition something other than diphtheria, such as

1. Jour. Laryng., Rhinol. and Otol., 1898, viii, 728.

2. Quoted by Loeffler, l. c.

3. Brit. Med. Jour., 1898, i, 1008.

4. Zelt. f. Hyg., 1890, Bd. 8. Quoted by Loeffler, l. c.

5. Berl. klin. Wehnschr., 1897, Nr. 35. Quoted by Loeffler.

6. Klin. Jahrb., 1908, Bd. 19, S. 497.

7. Deutsch. Arch. f. klin. Med., 1906, Bd. 89, S. 292. Quoted by Loeffler, l. c.

8. Rep. Chicago Board of Health, 1905, p. 45.

9. This is the total number of first culture cases in which the physician ventured any diagnosis at all.

"tonsillitis," "ordinary sore throat," etc., examination at the laboratory proved that 88, or 26.2 per cent., were true diphtheria. The attending physician was unwilling to commit himself in 247 cases, and called them doubtful. Of these, 71 (28.1 per cent.) contained diphtheria bacilli. Hence, it would seem that if, in Indiana at least, the physician depended solely on the gross appearance of the throat for diagnosis: (1) Parents would have to buy expensive antitoxin needlessly in 45 per cent. of the cases pronounced diphtheria; and (2) that in more than 25 per cent. of the cases diagnosed "not diphtheria," children would really need antitoxin and not get it.

The results of examinations at other laboratories do not differ greatly from those given above. At the Boston City Laboratory it was found that "when a physician makes definitely a positive clinical diagnosis at the time of taking the culture, bacilli are found in 68 per cent. of the cases," and that when he "makes a definitely negative diagnosis . . . bacilli are found in 11 per cent. of the cases."¹⁰ J. L. Neff,¹¹ director of the Philadelphia City Laboratory, found diphtheria bacilli in 83 per cent. of cases diagnosed diphtheria clinically, in 35 per cent. of those diagnosed "not diphtheria," and in 46 per cent. in which the diagnosis was doubtful. At the Chicago Laboratory¹² cultures from 34 per cent. of cases diagnosed diphtheria contained diphtheria bacilli, 13 per cent. of those pronounced tonsillitis, and 8.6 per cent. of those in which the physician did not venture a diagnosis. These results may be tabulated as follows:

	Indiana. %	Bos- ton. %	Phil- adel- phia. %	Chi- cago. %	Average. %
Clinical diag. positive					
Bact. diagnosis positive	53.8	68	83	34	59.7
Clinical diag. negative					
Bact. diagnosis positive	26.2	11	35	13	21.3
Clinical diag. doubtful					
Bact. diagnosis positive	28.1	27	46	8.6	27.7

Comparisons of clinical and bacteriological diagnoses may be misleading. There are at least two sources of error that should be noted. First, the physician's diagnosis may be changed even before he receives the report of the laboratory examination. Secondly, "the cultural report, especially when negative, does not indicate correctly in all cases the presence or absence of the disease of diphtheria, although the positive

reports are reliable as showing the presence of the bacilli of diphtheria."¹⁰ If this last fact were thoroughly grasped by practitioners the labors of the health authorities would be much easier.

While the figures given above prove that it is not only more scientific, but also more economical to make bacteriological examinations of all sore throats, regardless of their severity, they do not justify withholding antitoxin in urgent cases until the report from the laboratory is received. However, in mild cases that can be watched, it is safe to wait until the result of laboratory examination has been obtained, if it can be had within a reasonable time.

All state laboratories are somewhat handicapped by the fact that it is usually eight to twenty-four hours after the swab has been taken from the throat before it is delivered at the laboratory. This necessitates some delay in getting the report to the physician. The difficulty can be partially obviated by the method in use at this laboratory. As soon as the specimen is received, a culture is made and a smear from the swab examined. A diagnosis can sometimes be made from this smear, and nearly 5 per cent. of our specimens are reported within an hour after they reach the laboratory. Where there is the slightest doubt as to the findings on the swab, the case is not reported until the culture has been examined. The cultures are examined at the end of six or eight hours, and about 5 per cent. more can be reported. No case is pronounced negative from the swab. An analysis of 263 specimens show that 35.6 per cent. of cases diagnosed positive or "probably positive" from the swab, were confirmed on culture; while 75.3 per cent. of the swab diagnoses, both positive and negative, were confirmed by culture. At the Boston City Laboratory, "out of 441 swabs examined, 329, or 74.5 per cent., were reported as the culture proved."¹³ While three-fourths of the swab diagnoses are confirmed by cultures, it is not thought safe to report any case negative from the swab alone. But every specimen is reported in not more than twenty-four hours after it reaches the laboratory. Reports will reach physicians much more quickly if they request that the results be sent by telegraph.

Several practical conclusions may be drawn from the facts given above.

1. Since diphtheria is vastly more prevalent during the school months and since school children, who so frequently have chronically diseased throats, may easily become diphtheria bacilli-carriers, systematic school inspection with subse-

10. Twenty-ninth Annual Rep. of Health Dept. of Boston, 1900, p. 96.

11. Personal communication.

12. Rep. Chicago Board of Health, 1905, p. 46.

13. Rep. of Director of Bact. Lab. of Boston Board of Health, 1908, p. 6.

quent proper treatment of pathological throat conditions will undoubtedly produce a very marked decrease in the annual number of cases of diphtheria in Indiana.

2. The fact that a large number of cases diagnosed "not diphtheria" clinically prove positive on bacteriological examination, and *vice versa*, demonstrates the importance of taking cultures from every sore throat, regardless of the age of the patient or the severity of the symptoms.

3. It is likewise important in combating the spread of this disease to take cultures from the throats of every person who has come in contact with a case of diphtheria.

4. All persons whose throat cultures contain diphtheria bacilli, whether suffering from any symptoms of the disease or not, should be placed in quarantine and kept there until at least one culture, or, better, two consecutive cultures, show that these bacilli have disappeared. The administration of antitoxin has little or nothing to do with the disappearance of diphtheria bacilli from the throat.

5. An arbitrary time limit of quarantine in diphtheria is not justifiable. Release from quarantine should be governed entirely by the results of bacteriological examination of subsequent cultures from the throat of the patient.

UMBILICAL HERNIA CONTAINING ALL OF THE ABDOMINAL VISCERA.

JOSEPH RILUS EASTMAN, M.D.
INDIANAPOLIS, IND.

The accompanying photograph shows somewhat indistinctly a remarkable case of umbilical hernia, congenital in character, as umbilical herniae usually are. The sac had but one coat—



Large umbilical hernia with only a transparent peritoneal covering and containing all of the abdominal viscera.

a peritoneal coat—which, though somewhat thickened, was quite transparent, making it possible to determine with considerable precision the contents from without. Two days after the birth of the infant, a fruitless attempt was made to return the contents of the sac to the abdominal cavity.

It was found that the extruding organs were for the most part firmly adherent to each other and replacement was impossible. The abdominal cavity was very much smaller than the sac. The extrusion having taken place, no doubt, two or three months before birth, the abdominal cavity therefore failed to develop to its normal relative capacity. Though an autopsy was not permitted and any estimate as to the relative size of the sac and the abdominal cavity would be at best a mere guess, I suspect that not one-third of the bulk of the extruded abdominal viscera could have been contained in the abdomen, even if the replacement had not been rendered impossible because of the adhesions. In the sac were the liver, gall-bladder, spleen, pancreas, stomach, most of the large and small intestines and the bladder. The child was a female. The extruding sac was round and measured approximately 17½ centimeters in diameter.

The child died on the fifth day.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 536, Vol. II.)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

COMPTON, JOHN W.—Evansville (1825-1905). S. T. 1905, 444. Dr. Compton contributed the following articles to our State Transactions: "Sanitary Progress," 1881, 18; "Animal Vaccination," 1882, 188, and "The Treatment of Ante-partum Hemorrhage," 1888, 75. He was quite a contributor to medical journals and medical societies. See Robson, p. 606.

COOK, WARD.—Pendleton (1808-1894). S. T. 1895, 408. Dr. Cook combined all the qualifications of the early pioneer practitioners. He was born in Virginia, Oct. 9, 1808. In 1832 he came to Indiana on horseback and began the practice of medicine in Madison county, after receiving a license from the Thirteenth District Medical Society. His professional life comprised a period of fifty-seven years, and most of the time was passed at Pendleton and Anderson. He wrote many valuable medical papers, one on "Laceration of the Perineum in Parturition," Trans. 1892, 142. He died at Pendleton, Dec. 24, 1894, and is buried in the village cemetery at that place near the railroad. I never pass by on the cars, when it is not dark, that I do not honor his memory by looking through the window at his monument. See I. M. J., Vol. xiii, 336, ib., for excellent portrait, facing p. 319.

COOPER, WILLIAM.—New Albany (1809-1879). Was born at Chambersburg, Pa., March 27, 1809. Graduated at Jefferson Medical College in 1834, and in 1835 located at New Albany, and for a time was in partnership with Dr. Pleasant S. Shields. He was a visitor to the Jeffersonville penitentiary in the forties, and added several humane conditions to that institu-

tion. His name is on the list of physicians at the convention of 1849. During the Civil War he was a surgeon in the military hospital at New Albany. He died July 10, 1879. Dr. Samuel Cooper (1838-1888), son of the above, moved to St. Louis county Missouri, where he died in March, 1888.—Letter from Mrs. Mary Cooper Moore, Wichita, Kas., daughter of William Cooper.

COREY, LAVANNER.—Grant county (1834-1896). S. T. 1897, 350.

CORLEW, RUFUS M.—Evansville (1843-1896). S. T. 1896, 272.

CORNETT, WILLIAM T. S.—Madison (1805-1897). Was born July 11, 1805, at Carrolton, Ky., and died at Madison, Ind., May 6, 1897. He came to Indiana, locating at Versailles, Ripley county, in 1825, where he remained in active practice for forty years. At the time Dr. Cornett located in Indiana, each judicial district constituted a medical district, and the district society had three censors whose duty it was to examine applicants, and if found qualified they would give a permit to practice until the next meeting of the society. Dr. Cornett came under this rule. In 1852 the University of Louisville and the Indiana Central Medical College each conferred upon him the degree of Doctor of Medicine.

Dr. Cornett was the first president of the Indiana State Medical Society, and delivered the first annual address at Indianapolis, May 15, 1850. Published in *Transactions* 1850, 13.

In 1866, having become somewhat infirm, Dr. Cornett gave up active practice and removed to Madison, where he practiced only in consultation. Here he became interested in geology and in time became thoroughly familiar with the geology of southern Indiana.

He represented the county of Ripley in the State Senate for six years, beginning in 1841. Dr. Cornett writes (*I. M. J.*, May, 1893, 323): "At the session of 1843-4, when the revenue bill of the House was reported to the Senate I moved to amend the bill so that an additional one cent on the hundred dollars be levied as a fund with which to build a Lunatic Asylum. This amendment was carried in the Senate, and the House concurred in the amendment. With this fund a farm was purchased near Indianapolis, and on it the first Hospital for the Insane erected. This property is said now to be worth a million and a half dollars. The history of the origin and progress of this institution has been written and published more than once, and there has been no mention of my name in connection with it. For the truth of my statement see *Senate Journal*, 1843-4, page 521. The above injustice is my apology for naming the subject here."

Dr. Cornett contributed a number of valuable papers on medical topics to various journals. In the *Transactions* of our state society he gave an admirable address on the "Use, Progress, State and Future Prosperity of Medical Science," 1850, 13. Also, "Report of the Committee on the Practice of Medicine," 1852, 33. "A Case of Gangrene of the Foot from Ossification of the Leg," 1853, 151, and an exceedingly interesting report (from which I have already made an extensive quotation) on "Professional Reminiscences," 1874, 30. See Robson, p. 60. See picture, *I. M. J.*, Vol. xi, facing p. 321.

COURTNEY, JAMES T.—Whitewater (1855-1886). S. T. 1887, 190.

COWAN, JOHN A.—Auburn (1843-1885). S. T. 1886, 200.

CRAPO, JOHN R.—Terre Haute (1850-1905). S. T. 1906, 503.

CRAVENS, SAMUEL C.—Bloomfield (1839-1903). S. T. 1904, 351. *I. M. J.*, Vol. xxii, 162. (Picture).

CRIPPEN, E. H.—Milroy (1833-1896). S. T. 1896, 262.

CRIST, DANIEL, O.—Indianapolis (1824-1899). S. T. 1899, 402. For a number of years he was a member of the faculty of the Central College of Physicians and Surgeons (Indianapolis), having charge of the department of materia medica and therapeutics.

CROSBY, THE. H.—Bluffton (1818-1883). S. T. 1883, 274.

CROSS, JOSEPH B.—Bainbridge (1824-1889). S. T. 1889, 215.

CROUSE, JEROME H.—Dayton (1843-1908). Dr. Crouse was a soldier of the Civil War, having served three years in the Tenth Indiana Light Artillery. He was a native of Dayton, and practiced there for twenty years. See memoir, *I. M. J.*, Vol. xxvii, 3.

CRUNKELTON, FRED J.—Peru (1869-1896). S. T. 1896, 258.

CULBERTSON, ROBERT H.—Brazil (1830-1899). S. T. 1900, 320.

CUMMINS, BENJAMIN F.—Bluffton (1837-1887). S. T. 1887, 198.

CUMMINGS, HIRAM A.—Clear Spring (1857-1905). S. T. 1906, 498.

CURE, HIRAM W.—Martinsville (1830-1900). S. T. 1901, 482.

CURRAN, ROBERT.—Jeffersonville (1806-1872). S. T. 1872, 133.

CURRYER, WILLIAM F.—Indianapolis (1845-1902). *I. M. J.*, Vol. xxi, 40.

CURTIS, GEORGE L.—Columbus (1835-1898). S. T. 1898, 390. Dr. Curtis graduated in medicine from the Indiana Medical College in 1877, was professor of hygiene and sanitary science in the Indiana Medical College from 1883 to 1890, and at the time of his death was professor of diseases of the nervous system in the medical department of the University of New Orleans, having delivered a course of lectures in that institution in 1897. While never engaging in the practice of medicine, he took a lively interest in everything pertaining to it. He was author of a number of books of a high order, pertaining to religious subjects.

He was pastor of the Methodist Episcopal Church at Columbus, Indiana, at the time of his death, which occurred at Naples, Italy, April 1, 1898, while on a tour to the Holy Land. An interesting sketch of his life will be found in the *Transactions* named above, also *I. M. J.*, Vol. xvi, 412.

CUSHMAN, ARBACES.—Graysville (1840-1908). *Jour. Ind. Med. Assoc.*, Vol. i, p. 205. Was a soldier of the Civil War.

CUSHMAN, DANIEL W.—Terre Haute (1855-1907). S. T. 1907, 476.

DAILEY, JAMES J.—Milton (1833-1879). S. T. 1880, 230.

DALGLEISH, HENRY T.—Vevay (1860-1902). S. T. 1902, 411.

DANCER, JOHN.—South Milford (1830-1896). S. T. 1897, 362.

DAVENPORT, HENDERSON D.—Sheridan (1846-1908). Jour. Ind. State Med. Assoc., Vol. 1, 158. Was a soldier of the Civil War.

DAVENPORT, THEODORE.—Warsaw (1828-1884). S. T. 1885, 221. Dr. Theodore Davenport was born in Sullivan county, New York, Oct. 4, 1828. Completed his studies at the Albany Medical College, January, 1851. After practicing at Oswego, and at Roanoke, Ind., he settled in Warsaw, April 5, 1857, and practiced there until the time of his death.

At the session of the Legislature in 1875 he was elected one of the directors of the Northern Prison at Michigan City, Ind. He was president of the Board of Directors, and during his incumbency (two years) the north wing and a large workshop were added to the prison.

DAVIDSON, GREENLEAF N.—Noblesville (1829-1893). He was a corporal in Company E, 168th Reg. Ohio Vols. He held the chairs of botany, therapeutics and materia medica in the Physio-Medical College of Indiana from 1873 to 1891.—Dr. W. A. Spurgeon.

DAVIS, EUGENE F.—Indianapolis (1871-1903). S. T. 1903, 337.

DAVIS, ROBERT P.—Portland (1836-1902). S. T. 1902, 412. For a short time was assistant surgeon of the Eighty-fourth Reg. Ind. Vols.

DAVIS, SAMUEL.—Indianapolis (1814-1886). S. T. 1886, 216. Was surgeon of the Eighty-third Reg. Ind. Vols. See I. M. J., Vol. iv, 223.

DAY, SAMUEL D.—Shelbyville (1811-1893). S. T. 1894, 218.

DAYHUFF, A. F.—Kokomo (1827-1884). S. T. 1886, 195.

DE BRULER, OLIVER E.—Ireland (1857-1892). S. T. 1893, 248.

DEMING, ELIZUR H.—Lafayette (1797-1855). Dr. Deming was born in Great Barrington, Mass., March 4, 1797. He was a graduate of Williamstown College, and was considered the best Hebrew scholar that ever graduated from that institution. The Greek and Latin languages were almost as familiar to him as the English. In 1827 he received the degree of M.D. In 1821 he removed to Chillicothe, Ohio, and began the practice of medicine, but being a Mason, and at that time the order being persecuted, he changed his residence. In 1833 he received a commission as surgeon in the U. S. Army, but owing to the prevalence of cholera he resigned and went home to care for his family. In 1834 he located in Lafayette. In 1842 he defeated Hon. J. Pettit for the legislature, running as an anti-slavery candidate. In 1846 he was appointed to the chair of materia medica and therapeutics in the Laporte Medical College. In 1853 he was appointed to the chair of general pathology and clinical medicine, in the University of Missouri, and had just completed his second course before his decease.

Before his appointment in Missouri, an informal correspondence was had with him by the Regents of the University of Michigan, in reference to his appointment to the presidency of that institution. However, his anti-slavery views were an insuperable objection with those guardians of private opinion, whose astuteness detected the dangerous heterodoxy, which the dull official perception of Missouri statesmen totally overlooked. "Of whom the world was not worthy!" He died Feb. 23, 1855. He was president of the state society in 1854, and delivered an address, found on page

14 of the Transactions for that year. The reader will find a beautiful and scholarly Bibliographical sketch of the late Dr. Deming," by the late Dr. John S. Bobbs, from which I have condensed the above, in State Transactions for 1857, p. 53.

DEPEW, RICHARD J.—Indianapolis (1815-1897). I. M. J., Vol. xv, 471.

DE VORE, HENRY V.—Greencastle (1854-1892). S. T. 1892, 293.

DICKEN, JAMES L.—Lafontaine (1821-1900). S. T. 1900, 321.

DILL, NATHANIEL C.—De Soto (1860-1897). S. T. 1897, 355.

DILLS, THOMAS J.—Fort Wayne (1847-1899). S. T. 1899, 410. Dr. Dills was a specialist of promise at the time of his early death. For some time he filled the chair of ophthalmology and otology in the Fort Wayne Medical College. In the Transactions named, Dr. Wheelock pays a fine tribute to Dr. Dills' memory. In the Transactions 1878, 92, he contributes a "Report of a Case of Basedow's or Graves' Disease," and in 1884, 75, "Two Cases of Intraocular Tumors, with Remarks." He died at Pomona, California, while seeking relief from a lingering illness.

DOAN, N. W.—Curtisville (1829-1905). S. T. 1906, 501.

DOLPH, CASSIUS M.—Pleasant Lake (1860-1899). S. T. 1900, 322.

DONALDSON, EBENEZER F.—Wabash (1829-1898). S. T. 1899, 383.

DOOLEY, ALDINE J.—Marion (1872-1906). S. T. 1907, 484.

DOWLING, HENRY McCABE.—New Albany (1805-1852). Born April 5, 1805, and died Jan. 26, 1852. Was a graduate of the University of Pennsylvania. Was a member of the Medical Convention, June 6, 1849.—Judge Dowling.

DRAYER, PETER.—Hartford City (1840-1901). S. T. 1903, 338.

DRYDEN, THOMAS F.—Clayton (1835-1896). S. T. 1896, 275.

DU KATE, JOHN B.—Vincennes (1849-1902). S. T. 1903, 339.

DUNHAM, VALENTINE.—Madison county (1812-1882). S. T. 1882, 201.

DUNLAP, JOHN M.—Indianapolis (1829-1899). S. T. 1899, 408. From 1869 to 1872 he was demonstrator of anatomy in the Medical College of Indiana. Later he abandoned general practice and devoted himself to diseases of the nose and throat. See I. M. J., Vol. xvii, 404.

DUNLAP, LIVINGSTON.—Indianapolis (1799-1862). Was present at organization of State Medical Convention in 1849, and presided at that meeting. At this convention Dr. John H. Sanders was temporary and Dr. Livingston Dunlap permanent president.

DUNNING, LEHMAN H.—Indianapolis (1850-1906). Was born at Edwardsburg, Michigan, April 12, 1850, and died at Indianapolis, Jan. 4, 1906. He began the practice of medicine at Troy, Michigan, removed to South Bend, Indiana, in 1873, and to Indianapolis in 1889, where he continued to reside until the date of his death.

While residing at South Bend his work and contributions to medical literature began to attract attention.

Probably he was the first in the state to treat the floating kidney by fixation. He also did nephrectomy for suppurative diseases. His early gynecological papers are case reports with remarks, evincing thorough study, as they pertain to developmental deficiencies and anomalies of the uterus to pelvic peritonitis, and to mammary and uterine cancer. A very interesting article may be read on "Report of a Case of Extirpation of the Kidney, with Remarks," Trans. 1887, 127. The patient made a good recovery.

Preparatory to removal to Indianapolis he spent some time abroad in the hospitals in Vienna, London and Paris. On his return he was appointed adjunct professor of diseases of women in the Indiana Medical College. Upon the death of Dr. Thomas B. Harvey he was succeeded as professor of medical and surgical diseases of women by Dr. Dunning. This new field being opened, he rapidly developed as a lecturer and instructor, until he became an expert teacher and operator.

Honors came to Dr. Dunning. He was chosen to the office of president of the Indianapolis Medical Society, the Indianapolis Gynecological Society, and the American Association of Obstetricians and Gynecologists, and in 1905 Chairman of the Section on Gynecology of the American Medical Association.

Professionally, Dr. Dunning died prematurely young. He was a religious man and an ardent member of the Methodist Episcopal Church.

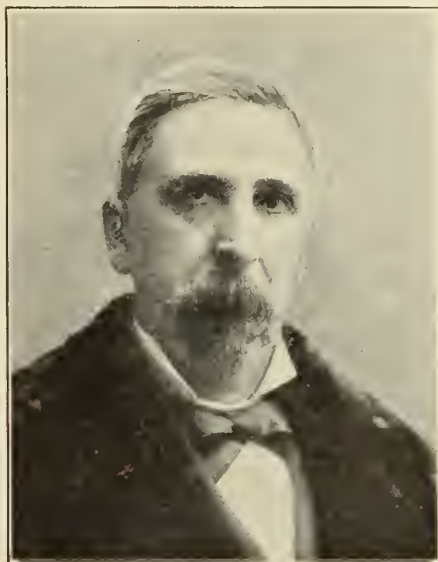
(In the preparation of this article I am especially under obligation to the memorial address on the life and character of Dr. Dunning by Dr. Hugo O. Pantzer.) See Stone, p. 144, with portrait. Also editorial, I. M. J. (with later portrait), Vol. xxiv, 266.

DUZAN, GEORGE N.—Indianapolis (1841-1893). Stone, p. 608. He contributed two papers to the State Society: "Nature and Cure of Disease," Trans. 1871, 133, and "Cholera Infantum," Trans. 1873, 27. See I. M. J., Vol. xii, 219.

DWIGGINS, MOSES F.—Richmond (1852-1890). S. T. 1890, 161.

EASTMAN, JOSEPH.—Indianapolis (1842-1902). S. T. 1903, 340. Dr. Eastman was born in Fulton county, New York, Jan. 29, 1842. His early education was limited. For three years past the age of eighteen he worked at the trade of a blacksmith. In 1861 he was a member of the Seventy-seventh New York Volunteers, and during actual conflict in battle showed himself to be a brave soldier. After the battle of Williamsburg he was taken sick and was sent to Mount Pleasant Hospital, Washington, D. C. After his recovery he was appointed hospital steward in the United States Army and graduated from the University of Georgetown in 1865. Until 1866 he served as a surgeon in the U. S. Volunteers and was mustered out at Nashville, Tenn., the same year. Dr. Eastman engaged in general practice of medicine and surgery, first in Clermont and later in Brownsburg, Indiana, and in 1875 located in Indianapolis, when he became demonstrator of anatomy in the college of physicians and surgeons in that city. At the organization of the Central College of Physicians and Surgeons, in 1879, Dr. Eastman accepted the chair of anatomy and clinical surgery and was one of the most prominent members of the faculty. At a later period he became its president and the title of his chair was changed to diseases of women and abdominal surgery, continuing in this department of medicine, in which he became so eminent, until his death. From 1886 his practice was limited to diseases of women and abdominal surgery.

Hirst's Obstetrics, Vol. ii, page 267-270, gives him credit for being the second in the world and the only American surgeon who, in operating for extrauterine pregnancy, has dissected out the entire sac which contained a living child, and saved the life of both mother and child. In 1891 Wabash College conferred upon him the degree of LL.D. For many years Dr. Eastman had been a contributor to the more prominent medical journals of the United States and he has been given credit for a considerable amount of original work in the department of abdominal surgery. Most of the instruments which he used were either invented by himself or an improvement upon the ideas advanced by others. He was one of the founders of *The Medical and Surgical Monitor*. He contributed a number of valuable papers to the State Society: "Upward Dislocation of the Sternal End of the Clavicle," Trans. 1878, 98; "Excision of the Knee Joint, with Cases," Trans. 1879, 108; "A Few Thoughts on the Anatomy, Surgery and Hygiene of the Rectum," Trans. 1883, 155; "Four Cases of Abdominal Surgery, with Com-



JOSEPH EASTMAN, M.D.

ments," Trans. 1884, 82; "Abdominal Surgery, with Cases and Comments," Trans. 1885, 96; "A Case of Hysterectomy, with Practical Comments on Laparotomy," Trans. 1887, 133; "Ovarian Statistics—Twenty-one Cases," I. M. J., December, 1886, 379.

Dr. Eastman was among the first, if not the first abdominal surgeon in Indiana to operate in doubtful cases. Prior to his time surgeons hesitated to operate in critical cases for fear of a high mortality record. He was fearless, and saved many valuable lives in his own practice, and taught other surgeons to do likewise. "By rare force of character, determination and hard work he advanced himself to a position of acknowledged learning and skill in surgery, gaining a fame which was both national and international, and his personality made a strong impression upon patients and doctors alike."—Dr. Theodore Potter. See Stone, p. 150; I. M. J., Vol. xxi, 40. Also "A Sketch," by Dr. Samuel E. Earp, *Med. and Surgical Monitor*, June, 1902 (with portrait), from which much of the above information was derived.

(To be continued.)

CHRONIC NON-TUBERCULAR ARTHRITIS.*

PATHOLOGY AND CLASSIFICATION.

JEWETT V. REED, M.D.
INDIANAPOLIS, IND.

Diseases of joints have been subject to all possible forms of classification, either according to their etiology, pathology, clinical features, or a combination of these. A satisfactory classification is extremely difficult for several reasons. From the standpoint of etiology it is impossible to base a classification because many etiological factors may produce the same pathological condition, while in other instances a certain single cause may produce a variety of morbid changes in the joints. In fact, the gonococcus is capable of producing almost every known form of arthritis.

A classification of the arthritides based upon the pathological changes produced is the most rational, but this is difficult because our knowledge of these changes, especially in the early stages of the disease, is very imperfect. Moreover, one form of joint inflammation may gradually change into another form, while in many other cases, two or more of the so-called primary changes may be present in the same joint. Perhaps there are no structures of the body, the diseases of which are so poorly understood as the joints. Any discussion of these diseases at the present time must be considered provisional, and subject to many changes when we have gained more knowledge regarding the etiology and pathology of these conditions. In order to study joints from a pathological standpoint, it will be necessary to render obsolete the term "rheumatism," except perhaps in the single instance, acute articular rheumatism. To diagnose a chronic joint disease as "rheumatism" is worse than useless. It serves only as a shield behind which we hide our inability to determine the true pathological condition in the joint.

At present an attempt will be made to classify the various forms of arthritis, based upon the primary and secondary pathological changes occurring in the joints, and at the same time to show the relations between these joint changes and their etiological factors.

According to Hoffa, who classifies according to etiology, all forms of arthritis may be divided into the tubercular and the non-tubercular. The latter group may be subdivided into the traumatic, infectious, toxic, neuropathic and constitutional.

This last division includes those joint changes that occur in gout, scurvy, hemophilia, purpura and angio-neurotic edema.

The forms of arthritis due to trauma, infections and toxic conditions help to make up that great group of chronic joint affections generally classed as arthritis deformans, rheumatoid arthritis, osteo-arthritis, chronic rheumatism, etc.; and it is this group of joint diseases that an attempt will be made to classify on a working basis. The forms of arthritis due to gout, tuberculosis, purpura, etc., have a fairly definite and distinct pathology peculiar to each form, and as a rule there is comparatively little difficulty in recognizing these. Still even in these more definite joint lesions, the late pathological changes may closely resemble those changes seen in the rheumatoid arthritis and osteo-arthritis groups.

The chief etiological factors of the joint affections under consideration may be grouped under three headings, namely: trauma, infections and toxic conditions. Under trauma may be mentioned contusions, sprains, chronic strains and gross injuries to the joints. The chronic joint changes following the various forms of trauma are due to the persistence of the effusion, and to the roughness or irregularities of pressure over the articular surface.

One form of trauma should receive special mention, as it is fairly common and is often unrecognized—that is the chronic strain. This occurs whenever the line of pressure passing through a joint becomes deflected. This is fairly common in the knee and ankle joints, occurring secondarily to flat-foot and badly reduced fractures of the leg. There is a constant strain on the lateral ligaments of one side of the joint, and at the same time there is an inequality of pressure exerted over the articular cartilages. The result is a constant pain in the joint, followed by an effusion and later by a partial pressure atrophy of the cartilages. In fact, any factor that tends to produce an unequal distribution of pressure between the articular surfaces, leads to an atrophy of the cartilage at the point of greatest pressure, with a subsequent irregularity of the articular surfaces. This condition is also seen in cases of loose cartilage, in joints with a lax capsule and in villous arthritis. The Charcot's joint of tabes and syringomyelia is now considered by several neurologists to be due primarily to trauma. The primary injury of the joint is allowed to go unprotected and untreated on account of the loss of the sensation of pain. A chronic joint hydrops forms, which is followed by atrophy of cartilage, and finally by marked deformity of the joints.

* Read at the Annual Meeting of the Indiana State Medical Association, Oct. 8, 1909.

The second group of etiological factors, the most important cause of chronic arthritis, includes the infections. Bloodgood writes: "In spite of the absence of a definite bacteriological proof, more and more investigators are inclined from clinical and pathological studies to the view that the majority of forms of both acute and chronic arthritis are of infectious origin."

The various organisms and infections that may produce both acute and chronic arthritis are as follows:

1. The gonococcus. This organism takes precedence over all others on account of the frequency, seriousness and variety of joint lesions it can produce.

2. The staphylococcus and streptococcus. These seldom attack the joints except in general pyemia and in penetrating wounds.

3. The pneumococcus. This organism may produce a mild degree of acute arthritis as a complication of pneumonia, but the condition rarely becomes chronic.

4. The diplococcus rheumaticus. This is the probable cause of acute articular rheumatism, and very rarely leads to permanent joint changes.

5. The typhoid and paratyphoid bacilli. A general infection with these organisms may be complicated by a mild degree of acute arthritis which generally subsides, leaving a normal joint. More important, however, is the infection of the ligaments of the spinal column with these organisms, producing the so-called "typhoid spine," which frequently results in a spondylitis deformans.

6. Influenza. An attack of this infection is the starting point of a chronic synovial arthritis, or "arthritis deformans."

7. Syphilis. This may produce almost any form of arthritis, but with the exception of the arthralgia and stiffness of the early secondaries, joint syphilis is comparatively rare. Occasionally it may simulate acute articular rheumatism or villous arthritis, and in cases of gummatous deposits about the joint it may give the general appearance of tuberculosis.

8. Unknown and unrecognized bacteria. This is the last and most important group of infectious agents that cause the greater number of forms of chronic arthritis. While the organisms themselves are often difficult or impossible to demonstrate, their source of supply, or the primary seat of infection can generally be found on thorough examination of the mucous membranes. In this connection Bloodgood says: "The tonsils stand first as a portal of entrance of non-tubercular arthritis, except the gonorrheal." Next in importance to diseased tonsils are the chronic infections of the pharynx, middle ear, frontal,

ethmoidal and maxillary sinuses. Carious teeth and pyorrhea alveolaris may also serve as a portal of entrance. At the other end of the alimentary tract may be found fissures and fistulae in ano, and ulcerating hemorrhoids that may furnish a chronic infection to the joints. Again, while it cannot always be determined definitely, the gonococcus probably plays an important part in the production of chronic arthritis, especially of those cases of apparently cured gonorrhea, where there is in reality a low grade of prostatitis, vesiculitis, endometritis, etc. While it may be impossible in many cases to trace a direct relation between the primary infection of the mucous membrane and the progressive joint lesions, nevertheless it has been a common experience to find that, with the treatment of these primary infections, the joint symptoms improve, or at least come to a standstill.

The third group of etiological factors consists of the toxic conditions. These toxins are not understood, but are probably elaborated in metabolic disturbances, in chronic gastro-intestinal diseases, and in very chronic cardiac and pulmonary conditions. These toxins frequently lead to the various osteo-arthropathies.

We will next consider the pathological changes that result from the above-mentioned etiological factors.

The morbid changes occurring in the various forms of arthritis may be classed under two chief groups, depending upon the stage to which the joint lesion has progressed. First, there are the primary pathological changes, the first joint changes that occur following the initial insult. Clinically, these primary changes may appear either as acute or chronic, depending largely upon the etiological factor.

The secondary and late pathological changes are those that follow the primary, and are due either to the healing of the primary inflammation, or to a constant but slight trauma resulting from an altered mechanism of the joint.

In all forms of arthritis the seat of active inflammation is in the synovial membrane, the joint capsule and the periarticular tissue. The articular cartilages may become injured, necrotic, or may atrophy, but they always play a passive part in the production of the morbid changes in the joints.

The Primary Pathological Changes.—These primary pathological changes may be divided into the acute and chronic. The acute group contains the joint hydrops, serofibrinous effusion, purulent effusion or joint empyema and periarticular induration.

Hydrops or serous effusion into the joint cavity may result from any form of trauma, from the bacteria of acute infections, from the toxins of acute infectious diseases and as a manifestation of angioneurotic edema.

Serofibrinous effusion is generally due to an infection of the synovial membrane with the gonococcus, pneumococcus and typhoid bacillus, or it may occur as an early stage of joint empyema.

Empyema of a joint is generally the result of an infection with the gonococcus or other pyogenic bacteria.

Periarticular induration occurs in its most typical form in acute articular rheumatism. It may also occur about a joint containing a serofibrinous or purulent effusion. In all of these conditions the periarticular tissue returns practically to normal. But there is another form of acute periarticular induration that occurs secondary to chronic infections of the mucous membranes. Clinically, this condition may look very much like acute articular rheumatism. There may be one attack or more commonly, repeated acute attacks, but, unlike acute articular rheumatism, each acute attack leaves the joint permanently swollen and stiffened, due to deposits of scar tissue in the periarticular tissue. The final result is identical with that seen in the chronic synovial arthritis.

Chronic Primary Pathological Changes.—Under this heading belong all of those forms of chronic arthritis, generally classed as "arthritis deformans" and "osteo-arthritis." In many cases these two forms are distinct; in others both forms may be present in a single joint. Both the arthritis deformans and the osteo-arthritis lead to an enlargement of the joint with impairment of motion. In the former the enlargement is due mainly to inflammatory deposits in and about the soft tissues of the joint, while in the latter it is due chiefly to a proliferation about the ends of the bones. Arthritis deformans and osteo-arthritis are respectively designated by Goldthwait as atrophic and hypertrophic arthritis. Hoffa calls the former the synovial form of chronic arthritis, the latter the osseous form of chronic arthritis.

We can therefore divide all the forms of primary chronic arthritis into two great groups: First, the synovial or atrophic form of chronic arthritis; second, the osseous or hypertrophic form of chronic arthritis.

The synovial form is due, probably in the greater number of cases, to a low grade of gonorrheal infection. Next in importance are the other chronic infections of the mucous membranes. Less frequent causes are influenza, typhoid and syphilis. Any of these above factors can produce a

chronic inflammation of the synovial membrane, joint capsule and periarticular tissues. All three of these tissues are probably involved in every case, but as a rule one tissue suffers more than the others. In a certain group of cases the chief inflammatory reaction involves principally the synovial membrane and its vascular fatty capsule, the results being a proliferation of the synovial fringe within the joint, forming the so-called villous arthritis. In another group of cases belonging to the synovial form of chronic arthritis, the inflammation attacks chiefly the joint capsule and periarticular tissue. Thus the synovial form of chronic arthritis may be divided into two distinct groups, depending upon whether the inflammation attacks principally the inner or outer layer of tissues about the joint. When the inflammation attacks chiefly the inner layer the result is a villous arthritis. When the outer layer is chiefly involved, a chronic periarticular thickening is the result.

With the formation of a villous arthritis, the joint cavity is more or less distended, with a great number of soft pedunculated fatty masses covered with a normal endothelium. Occasionally these fatty villous projections become fibrous or even cartilaginous. A chronic or intermittent form of hydrops is generally present in these joints. Villous arthritis leads to a swollen joint, with more or less constant pain and impairment of motion. Crepitation is generally marked, and the hypertrophied villi can often be palpated through the capsule.

The periarticular type of the synovial form of chronic arthritis shows a gradual increasing thickening of the joint capsule and adjacent tissue. This is due to the accumulation of scar tissue following a low grade of chronic inflammation, or to repeated acute attacks. This leads to a progressive limitation of the range of motion of the joint, which may finally result in absolute fixation. There is a decrease in the synovial fluid of the joint, otherwise its cavity remains unaltered. This form of pathological joint changes includes those joints commonly designated as arthritis deformans or rheumatoid arthritis.

Spondylitis deformans of the fibrous type, which is generally due to the gonococcus or to a typhoid or paratyphoid infection, also belongs in the class of chronic synovial arthritis. In this condition the lateral ligaments of the vertebra become infiltrated with scar tissue, producing a condition similar to the periarticular thickening about a joint.

The second primary form of chronic arthritis is the osseous type, the hypertrophic form, or the so-called osteo-arthritis. This form occurs most

ETIOLOGY OF NONTUBERCULAR ARTHRITIS.

PRIMARY PATHOLOGICAL CHANGES.

SECONDARY AND LATE PATHOLOGICAL CHANGES.

TRAUMA.

ACUTE.

- Joint hydrops, May be caused by (A-4-6-8-9-10-17) { Chronic or Intermittent hydrops } { Atrophy of Loose joint..... cartilage. } { Type of joint closely resembling the osseous form of chronic arthritis. }
- Sero-fibrinous effusion. May be caused by (4-6-8) { Necrosis of cartilage..... Bony ankylosis or Granulation tissue over synovial membrane..... } { Type of joint similar to the periarthritic form of chronic synovial arthritis }
- Empyema of joints. May be caused by (4-5) { Fibrinous ankylosis, or } { }
- Periarticular induration. May be caused by (1-4-5-7-10-11-14). Chronic periarticular thickening (identical with [b])

B. INFECTIONS.

CHRONIC.

4. Gonococcus.
5. Staphylo- and streptococcus.
6. Pneumococcus.
7. Diplococcus rheumaticus.
8. B. typhoid and paratyphoid.
9. B. influenza.
10. Syphilis.
11. Unrecognized bacteria from chronic infections.
- CHRONIC.
- Synovial form of chronic arthritis "atrophic."
- (a) Villous arthritis. May be caused by (2-4-11) { Loose joint bodies and Chronic hydrops } { Atrophy of cartilage..... } { Type of joint closely resembling the osseous form of chronic arthritis. }
- (b) Periarticular thickening. May be caused by (4-8-9-10-11-E).. Fibrinous ankylosis about joint.
- "Arthritis deformans" or "rheumatoid arthritis"
- Still's disease.
- Fibrous form of spondylitis.
- Osteous form of chronic arthritis. "Hypertrophic." (2-4-8-9-11-13).. Large deformed joints { lax or locked from irregularities of surface. }
- "Osteo-arthritis" monarticular or general.

C. TOXIC CONDITIONS.

12. Toxins of acute infectious diseases.
13. Metabolic disturbances and chronic intoxications.

D. CONSTITUTIONAL.

14. Gout.
15. Scurvy.
16. Hemophilia and purpura.
17. Angioneurotic edema.

E. DISUSE.

F. NEURO-ARTHROPATHIES.

Are probably due chiefly to the above factors, viz.: A-13-E.

frequently in old people, especially those suffering from chronic intoxications and metabolic disturbances. The osseous, like the synovial form, may also occur as the result of gonorrhea, chronic infections of the mucous membranes, typhoid and syphilis.

As stated above, the synovial form of chronic arthritis involves mainly the soft tissues about the joints. The osseous form involves chiefly the articular ends of the bones and cartilages. It must be remembered that the capsule of the joint blends with the periosteum of the bone at the epiphyseal line, and it is at this line that the arteries enter the bone to supply the epiphysis and articular cartilage. The first change that occurs in the formation of an osteo-arthritis is a chronic proliferative periostitis about the ends of the bones. This leads to the formation of new bone that extends beyond the edges of the articular surface in the form of osteophytes or bony, lip-like projections. At the same time the presence of a periostitis about the epiphyseal line constricts the blood-vessels as they enter the bone. This results in an anemic atrophy of the cartilage and a rarification of the ends of the bones. This allows the cartilage and later the underlying bone to become eroded with use. This erosion is seldom regular, which leads to marked changes in the articular surfaces.

Thus the principal changes occurring in the osseous form of chronic arthritis are, first, an hypertrophy of the bone about the edges of the joint; second, an atrophy and wearing away of the articular surfaces. The entire joint is enlarged, deformed, and its mechanism is greatly interfered with. Occasionally, complete immobility may occur, due to the deformity of the articular surfaces, or to the interlocking of osteophytes. A true bony ankylosis, however, never occurs.

The various types of joint lesions that belong under this heading of chronic osseous arthritis are as follows: The Heberden's nodes, which are probably the mildest form of this condition, the monarticular and generalized osteo-arthritis, the hip-joint disease of old people and the osseous form of spondylitis deformans. In the last-named condition the ligaments binding together the bodies of the vertebræ become transformed into bone. The bone and joint changes occurring in long-standing pulmonary and cardiac diseases, the so-called hypertrophic pulmonary osteoarthropathy, also belong to the group of osteo-arthritis. Also many of the Charcot joints probably belong under this division.

Secondary Joint Changes.—The secondary and late joint changes are those that follow any of

the above forms, either as the result of a healing process, or from the altered mechanism of the joint.

To begin once more with acute hydrops of the joint, this condition, which may not be serious in the beginning, may, if not relieved, lead to marked secondary changes. An acute hydrops may become either chronic or intermittent, which will lead to a looseness of the capsule. This lax joint will allow the articular surfaces to glide over each other in an irregular manner, and a certain degree of atrophy of the cartilages will result. These joints resemble to a certain degree those of the osteo-arthritic group, except that there is little if any bony proliferation about the ends of the bones. Many Charcot joints are an example of an extreme degree of this form.

Serofibrinous, and more especially purulent effusion into joint cavities, may lead to the most serious secondary changes. If the joint is not promptly drained before necrosis of the cartilage or destruction of the endothelial lining takes place, a permanent impairment of the joint will invariably result. With the destruction of the endothelium of the synovial membrane, even over small areas, there is a granulation tissue formation, which binds together adjacent surfaces, the final result being a true fibrous ankylosis. With necrosis of the articular cartilages, there will result a true bony ankylosis.

The acute periarticular induration, when due to the diplococcus rheumaticus, as a rule completely disappears, but when it is due to other organisms, a more or less permanent thickening results, producing a condition identical with the primary chronic periarticular thickening.

A joint suffering from villous arthritis receives more or less constant trauma from the friction of the villi. The result will be a chronic hydrops, a lax capsule and finally a wearing of the articular surfaces. This is more marked when the villi are of the fibrous type. Frequently the villi are torn loose from their slender attachments and lie free in the joint cavity. The rice bodies or "joint mice," commonly considered to be the result of tuberculous, are in reality detached fibrous villi.

The periarticular form of the chronic synovial arthritis, and also the osseous form, show no secondary changes except a gradual progression to complete immobility. In these cases the immobility must be distinguished from a true ankylosis, which occurs only in joints which have suffered an acute destruction of the cartilage or synovial membrane, as seen in intra-articular fractures, tuberculosis and empyema of the joint. The immobility in the chronic periarticular form is due to a thickening and loss of elasticity of the

capsule and periarticular tissue. This condition is also seen in joints stiffened from disuse.

In the osseous form the immobility is due to the extreme bony deformity about the articular surfaces.

DISCUSSION.

DR. H. C. SHARP, Indianapolis: The study of diseases of joints has occupied much more attention of the profession in recent years than formerly. Formerly we diagnosed practically all of our joint cases as either tubercular joint trouble, or rheumatism, but the x-ray has added materially to our anatomic and pathologic knowledge of the condition of the joints. But the unfortunate thing, after all, is that we have made very little progress in the relief of pain, to cure the disease or prevent deformity. There are about as many different nomenclatures as there are writers upon the subject, but Dr. Reed informed me confidentially that this is the real thing, so we will eliminate all other known nomenclatures in the future. The great trouble in the making of a nomenclature is that while we know the pathology fairly well, and the existing condition of the disease, we are so very short on etiology. Broadly speaking, joint diseases can be divided into infectious and non-infectious, and occasionally it would appear to cover the ground. But it does not answer for all cases, and we have the non-infectious troubles which are caused by trauma or some dyscrasia, such as hemophilia, or some purely functional disease, and then there is the type associated with anatomical changes and deformities, deforming arthritis, which may be secondary to disturbed nutrition, or it may be caused by a neurotic condition, such as tabes. Then another feature of the unfortunate condition of making nomenclature is that you will find a condition in one person that to all appearances is identical with that in another, and in the one it may be due to direct trauma and in the other to a former attack of rheumatic arthritis, or in another case it may be entirely due to some disturbance of metabolism. So it makes it impossible to give a well-defined and satisfactory classification of joint diseases. I think that as far as I have had opportunity to judge, Dr. Reed's classification is about as acceptable as any, but it will be impossible for us to get a perfect classification until we know something more about the etiology of the trouble.

DR. H. R. ALLEN, Indianapolis: I want to congratulate Dr. Reed on what has been a tremendous amount of work and a good classification, and on his having these printed forms here. It helps the presentation of any subject if we have an outline we can follow. He has given us the non-tubercular classification. That is a very large subject. I wish he had added to that, however, and given us the percentage of cases, as to how many were of each type as compared with tuber-

culous joints that we are meeting every day. That would have been a very clever demonstration, as the large part of tuberculosis shows in joint affections. You are all familiar with joints, and those of you who work with them know how many joints come to you tagged "rheumatism." I regard the rheumatic joint as one of the rarest joints known. The word "rheumatism" as applied to joints is merely a medicated swear-word. A doctor, instead of saying "damfino," merely calls it rheumatism. All hip diseases that come to the doctor from the Cincinnati district come with a red flannel bandage tagged "rheumatism." Where a man knows that the gonococcus has been at work in a nice married family, the word helps there. I have had a case recently where a clean married woman three weeks before her baby was born turned over in bed and hurt her knee slightly. It was dislocated laterally and considerably rotated. Neither the father nor the mother knew anything about venereal disease, or so they claimed. The mother admitted on careful examination that she was afraid the baby would lose its eyes from a terrible discharge, but no knowledge of the gonococcus could be extracted. I had another case a week later of so-called rheumatism of one wrist, one elbow and one ankle, favorite sites. The only information given by the patient was a series of mosquito bites. I wish some one would say there is no such thing as rheumatism, and then you would study your joints more carefully. Dr. Reed's effort here has been a general classification, and a very good one for us, because as he reads over his different classifications we are constantly applying it to a knee, a hip, or a shoulder, and it serves because it is incomplete. He has simply generalized on the subject. Each joint has its own peculiar set of injuries and peculiar manifestations. I like to see any member of this society or any other society go into the discussion of joints, because it is the largest subject we have before us, and I know it is the sentiment of every one here to regard this effort as Dr. Reed's "farthest north," and we are going to accept him, although he has not his instruments or his Esquimaux with him to prove it.

TUMORS OF THE TONGUE.*

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We meet with benign as well as malignant growths in the tongue. The former, while not threatening life, may still require removal, because they interfere with mastication, speech and swallowing, as exemplified in the following patient: Peter B., a farmer, unmarried, and

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 7, 1909.

27 years of age, consulted me Feb. 11, 1905, because of a growth involving the right side of the tongue, extending from a point opposite the first bicuspid tooth, backward almost to the epiglottis. He first detected it some twelve years ago, since which it has slowly enlarged until at the present time it approximates a large walnut in size. It has never bled, caused foul breath nor pained him. Upon inspection, the tumor is seen attached to the tongue muscle by a broad base and so intimately united with it that it is immovable without the tongue following. The surface is without ulceration and smooth, save for several smaller nodules which project from its lateral border, while coursing over the base of the tumor posteriorly are a number of large blood-vessels. To palpation it is hard but elastic.

Feb. 15, 1905, patient was admitted to St. Mary's Hospital and operated upon under general anesthesia after the following method: The tongue was drawn forward and the base of the tumor transfixed by two needles. Inside of the needles the growth was engaged in a loop of platinum wire, connected with a cautery battery, the circuit closed, and the fleshy mass slowly severed. Very little hemorrhage followed and healing ensued without complication. There has been no return of the tumor. Microscopical examination disclosed that the growth was largely made up of fibrous tissue, so it is properly termed a fibroma.

There is one form of growth that only occurs at the base of the tongue, namely, chronic enlargement of the lingual tonsil. It is most often found in persons who use their voice a great deal, such as public speakers and singers, and gives rise to a feeling as if a foreign substance is lodged in the throat with dry reflex cough. In addition, the voice easily tires and there may be a history of hemorrhage from the enlarged vessels at the base of the tongue.

Recognition of enlargement of the lingual tonsil is easy with the laryngoscopic mirror. Other innocent tumors reported as found in the tongue are lipoma, papilloma, chondroma and osteoma. Of vascular growths, we meet with the angioma and the lymphangioma. The former is made up largely of blood-vessels and varies in size from the small congenital nevus to the large pulsating aneurism. The lymphangioma arises through dilatation of the lymphatic spaces and may lead to enormous enlargement of the tongue, a form of macroglossia. The color of these tumors, their soft consistency, and the fact that through compression they are readily diminished in size, but refill as soon as the pressure ceases, renders their diagnosis not difficult.

Purely cystic formations may occur in any part of the tongue, but most frequently in the region of the foramen eecum. The dermoid cyst may contain hair and other tissue and develops here as in other parts of the body from embryonal tissue. Of the malignant tumors we find both the sarcoma and the carcinoma. The former, according to Butlin, is rare, and while of the latter great variations as to size, extent of ulceration, hardness or softness and rapidity with which the lymphatic glands are infected, occur, nevertheless but one form of cancer is met with in the tongue, and that squamous epithelioma.

The following case is of interest, since it illustrates the progress of the disease and the result following a rather unusual plan of treatment carried out under regular medical supervision: Mr. L. B., well past the fourth decade of life and a resident of a neighboring state, was afflicted with a cancerous growth involving the left side of the tongue and extending well down to its base. The lymphatic glands in the left side of the neck were infected. Patient had consulted eminent surgeons in Chicago, who advised against an operation, because of the extensive nature of the disease. As a last resort, a so-called cancer doctor was invited to apply a paste which he positively assured the patient's family was non-poisonous and made from green herbs gathered from the hills near his home town. Our connection with the case was by request of a brother to the patient, a fellow-practitioner, and to render emergency assistance, should occasion arise therefor. July 1, 1898, after the local use of cocaine, the paste was applied to the indurated ulceration, along the side of the tongue, for some fifteen minutes. The application was well borne by the patient and no untoward symptom followed. In the course of ten days a large slough separated, bringing away much diseased tissue. It was found, however, that the tumor had only in part been covered by the paste and that the left tonsil and the left side of the base of the tongue, also infiltrated by it, had gone untreated, and since the cancer doctor had returned to his home in a distant city, by request I undertook the application of the paste to these deeper parts overlooked at the time of the first treatment. Again, a large slough separated without unpleasant symptoms following the escharotic and the diseased surfaces in part underwent granulation. However, some of the external infected lymphatic glands suppurred and were incised, but the deeper progress of the disease continued unarrested and death occurred from exhaustion some five months later. The statement, however, that the paste was made solely from green herbs was not taken literally.

by any of us, since botany knows of no plant possessing such escharotic properties. The cancer doctor refused to impart to us the names of the plants he employed, and just what he added to them I do not know, but it was most likely chlorid of zinc.

Cancer of the tongue occurs most often in persons between 40 and 60 years of age and, according to Moritz Schmidt, the initial lesion may be a blister, vesicle, ulcer, fissure, wart or a nodule embedded in the substance of the tongue. Butlin's experience is that of all the actual beginnings of cancer, the warty-like growth is by far the most frequent, and any warty-like formation on the edge of the tongue, if not destroyed or removed, will, almost without exception, later develop into epithelioma.

The least frequent beginning is that as a lump or nodule situated in the depth of the muscle of the tongue. Early glandular involvement is to be expected, either in the floor of the mouth or at the angle of the jaw, or in the neck. The subjective complaint, so long as the growth is circumscribed, may be a feeling of thickness of the tongue, with effort in talking and eating. Pain with increased salivary flow and offensive breath is the rule after ulceration. Hemorrhage may then occur and become dangerous to life. The course of the disease may be stated as from one to three years with death the result of metastatic pneumonia, acute hemorrhage or from exhaustion.

Diagnosis.—Local manifestations on the tongue of such infectious diseases as syphilis, tuberculosis and actinomycosis may be mistaken for malignant disease. Primary syphilitic disease of the tongue is to be thought of in young persons; it is rapid in its development and attended by early glandular enlargement, with later secondary cutaneous eruption. An unbroken gumma, when single, is easily confused with epithelioma; when multiple and found on the dorsum of the tongue, the differential diagnosis is more readily made. Careful examination of the patient, as a rule, will disclose evidences of syphilis in other parts of the body, while the administration of large doses of iodid of potash is followed by rapid improvement. The serum test and examination for the spirochete pallida may also aid one in reaching a correct diagnosis.

Primary tubercular disease of the tongue is extremely rare, and is to be differentiated from malignant disease by searching for the tubercle bacillus and the reaction to tuberculin.

Actinomycosis is not often mistaken for cancer, and the finding of the ray fungus will prevent an error in the diagnosis. It must not be

overlooked that epithelioma may develop in an old syphilitic lesion, and it is well in all cases of doubtful diagnosis to excise a small portion of the growth under local anesthesia and have a competent microscopist report upon its pathological histology.

Causation.—As predisposing causes we may mention heredity, excessive smoking, irritation and wounding of the tongue through defective teeth or defective fillings. One case, in particular, I recall where the patient was most positive his trouble originated through a large amalgam filling in one of the lower molar teeth, constantly rubbing against the side of the tongue. As to the exciting cause of a malignant growth, we know next to nothing.

Prognosis.—This is bad, especially for cancer, since with our improved operative technic only about 10 per cent. recover.

Treatment.—Benign cystic growths may be evacuated, extirpated or snared off when located at the root of the tongue. Vascular tumors may be treated by electrolysis, the cautery or excision. I have had no experience with the old method of treatment by injection of a solution of iron. For solid benign growths, excision with the knife or snare is the operation.

A word of protest is in place against the indiscriminate employment of nitrate of silver or other irritative form of treatment in ulcer or warty-like growth of the tongue, since thereby the disease is frequently aggravated rather than improved. If you have decided that the growth is to be removed by destructive agent, use the thermo-cautery or the galvano-cautery from choice.

For malignant disease, early excision is the operation of election and one must not hesitate to go well outside of the growth into the healthy tissue in using the knife. The x-ray is not nearly so useful in the treatment of malignant disease of the tongue as in like affections of the skin. It may, however, be carefully applied with advantage during the healing stage after operation.

As a preliminary step in partial or complete amputation of the tongue for the prevention of hemorrhage, one should not omit ligation of both of the lingual arteries. This operation in persons with short and very thick neck is a difficult one, and I retain vivid recollection of a case where profuse bleeding followed wounding of the internal jugular vein in the practice of a very able surgeon. Operation upon the tongue alone when the malignant disease is complicated by lymphatic gland enlargement is not sufficient and the enlarged glands should either be removed at the time of making the primary operation or later through a secondary one.

DISCUSSION.

DR. JOSEPH RILUS EASTMAN, Indianapolis:—Dr. Brose has treated of such a very large variety that it will be difficult, it seems to me, for any discussor to follow him over such a large field, and, therefore, perhaps you will excuse me if I select two or three phases of the subject. I was glad to hear Dr. Brose remind us again that syphilitic lesions of the tongue are extremely likely to undergo carcinomatous change. There has been a good deal of confusion upon this point. I have often heard it mooted that syphilis gave a certain immunity against carcinoma. True, we can recall very few cases of carcinoma of the tongue or carcinoma elsewhere which had been implanted upon syphilitic lesions, and, as we look back over our work, we are reminded that it is extremely rare that we find syphilitic lesions and carcinomatous lesions to exist in the same individual. And yet I submit it only appears to be true. As a matter of fact it is not true. I am sure syphilitic lesions of the tongue are exceedingly likely to become cancerous lesions.

I recall asking Koerner, of St. Thomas Hospital, in London, whether he had found carcinoma of the tongue implanted on previous syphilitic lesions. He told me he was perfectly sure of it in at least twelve cases. Now I do not think it wise to temporize with any sort of lesion of the tongue which begins to take the nature of a neoplasm in any way. Syphilitic lesions have the potentialities of malignancy just as a benign adenoma may become malignant by some derangement of the basement membrane or variation of the normal arrangement of the cells and become the adenoma malignum elsewhere, as in the tongue. There are only, perhaps, negative evidences to support such a statement. We know the fibroadenoma means only a few more cells to become a sarcoma, and the sooner we cease to theorize, and realize our clinical observation, and recognize its potentialities for malignancy, and that it is cancer from the beginning, the more surely we will operate them before they become malignant and not afterwards, because, particularly in the case of the tongue with its rich vascularity, if it does become carcinomatous, the operation is practically hopeless.

It is time for us to grasp and utilize the instruction of so reliable a surgeon as Maurice Richardson, of Boston, that all these neoplasms, whether benign or malignant, should be treated as malignant and extirpated. In those benign lesions that come from the use of a clay pipe, or ulcerations that come opposite lost teeth from the use of tobacco, which I have often seen in my own experience, and which I have seen Dr. Charles Mayo treat with the hot soldering iron, or even these warty papilloma which break down through the basement membrane and invade the adjacent tissues, it is easy to excise a small piece under cocain or general anesthesia and submit it to the

microscopist, who can section it with a freezing microtome and give you a stained section in 12 to 15 minutes or less time. It is absurd, and it would be laughable if not so tragic, that after all the signs we wait for to tell us a neoplasm is malignant, are the signs of its inoperability, these enlarged glands, these ulcerations, etc. We wait for retraction of the nipple in carcinoma of the breast, for example, which means that the case has passed beyond the help and hope of surgery. We wait for cachexia, or constitutional dyscrasia. The patient is dead then, there is no time for anything. The time for the removal of neoplasms of the tongue, as elsewhere, is before they become malignant. That is conservatism in the truest sense.

DR. L. D. BROSE, Evansville (closing):—I want to emphasize the fact that it is necessary for the recovery of your patient to practice early operative interference in these cases. The saddest part of my experience has been to find that most of these cases have been temporized with or treatment has been neglected altogether.

CESAREAN SECTION AS A MEANS OF RAPID DELIVERY IN ECLAMPSIA.*

WALKER SCHELL, M.D.

TERRE HAUTE, IND.

The term eclampsia is applied to an affection characterized by convulsions, with more or less complete loss of consciousness.

These convulsions may occur before, during or after labor. Convulsions in the pregnant, parturient or lying-in woman occur in rather more than 1 per cent. of all cases, and are therefore sufficiently common to be of practical importance. The lives of both mother and child are in danger—in the case of the mother amounting to about 25 per cent., in cases at all grave or where there are several convulsions. The death of the child occurs in about 50 per cent. of cases of maternal eclampsia.

Where the convulsions take place before the period of viability of the child, it is of course lost, but in addition to this factor, it must be remembered that many of these mothers are albuminurics and that the grave toxemia also poisons the child. Many of these children perish of convulsions, and the pathological lesions present are frequently similar to those found in women who perish of eclampsia.

Our knowledge of the causation is still very incomplete, and Zweifel has termed it "the disease of theories;" nevertheless, certain changes

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have been observed, and these are of value in aiding us in the solution of many problems.

Carl Braun held that the toxemia in eclampsia gravidarum, parturientium and puerperarium was an evidence of uremia produced by retention of excrementitious elements of the urine. Braun came to the conclusion, in 1857, eclampsia was produced by *morbus Brightii* and uremic intoxication. His conclusion was based upon the finding in the urine of albumin, fibrin-cylinders, blood, etc. This was substantially the view held by most of the famous writers on obstetrics of that period, and by men of such attainments as Simpson, Dubois, Cazeaux, Litzmann.

There can be no doubt as to the frequency of renal changes in eclampsia, but the changes are often slight, the anatomical alterations being too insignificant to explain the grave symptoms present.

It is more nearly in accord with present views to ascribe necrobiotic changes of the renal epithelium and the fat degeneration of the glomerulus epithelium to a peculiar toxic substance generated by gravity.

Since 1886 it has been known that in eclampsia there were frequently present hemorrhagic and anemic necrosis of the parenchyma of the liver, due to thrombosis of the small branches of the portal vein. So great are the changes in the liver that some consider the disease an hepatotoxemia. I have in several cases seen evidence of hemorrhagic hepatitis. Blood is frequently diffused under the capsule and the insertion of the ligamentum coronarium. Blood has also frequently been found in the cavum peritonei of children born during convulsions.

Thrombosis and apoplexy are very common and indicate the grave nature of lesions of the brain frequently present. The French school, under the impulse imparted by the work of Bouchard, attacks the problem from the side of autointoxications, some claiming increased toxic qualities in the blood serum, others that it is due to metabolic poison left in the system by reason of changes in the liver.

It has also been claimed that the fetus itself generated the poisons, which, the mother being unable to excrete, produced in her pathological changes. This view was supported by the observations of a long list of writers, that convulsions usually ceased upon delivery, and in the case that I am about to report the convulsions appeared in the child, showing that it was the victim, if not the producer, of the toxemia which brought on the eclampsia of its mother.

Rupture of varix of the cerebral veins has been found as a cause of death in eclampsia, and apo-

plexy is not uncommon from violent convulsions. The condition of the vessel wall may be caused by toxemia.

There is also the observation of Schmorl of emboli in the lung capillaries of eclamptics, and these emboli are composed of the syncytioma or even chorionic villi. These observations are not supposed to have much bearing on the pathology of eclampsia, since they are frequently the finding in cases where the labor has been perfectly normal.

In a paper read before this society several years ago, I called attention to the fact that the lungs were the favorite ground for metastasis of the malignant chorion epithelioma, or the *syncytioma malignum*. It is then well known that in gravidity emboli from the fetal tissues of placenta are common.

Without going elaborately into the pathology of eclampsia, it is seen that there are many lesions and various anatomical changes, but that possibly none or all of these are the sufficient cause of the disease. There is as yet an unknown poison circulating in the blood, responsible for these lesions and the symptoms to which we have applied the term eclampsia.

When the physician stands face to face with convulsions, either in pregnancy or labor, all authorities agree that delivery should be accomplished as soon as measures suitable to the case in hand can be safely applied. Just how this should be accomplished in any given case is a matter of serious judgment, and is determined by the difficulties of effecting delivery. If the labor will end speedily in a natural manner, the obstetrician need not interfere. If the cervix is easily dilated and the labor can be finished by forceps in one or two hours, forceps or version should be operations of choice. When accouchement forcé must be resorted to in order that delivery may be accomplished, we must prepare to defend ourselves from criticisms.

Charpentier has furnished us statistics showing a mortality of 40.74 after accouchement forcé, and some authors have reported a death rate as high as 66 per cent. after dilatations and incisions of the cervix. Brutal dilatation of a firm and rigid cervix furnishes a high mortality, approaching 50 per cent. The delay in these cases is so great that the child is almost always lost.

When the manual dilatation can be accomplished after the method suggested by Dr. Philander A. Harris, in a reasonable time and with moderate force, rapid delivery may be accomplished by this means. Dührssen's deep incisions and his so-called vaginal Cesarean section will be rejected by most obstetricians as more dangerous

than Cesarean section, less under the eye, and the prevention of tears reaching high in the womb impossible, and the delivery may still be uncertain and difficult. If the child should be large or the pelvic outlet contracted, the delivery cannot be easily or rapidly accomplished. The dangers of sepsis and hemorrhage in these manipulations advised by Dührssen are considerable. It may have some value where the cervix is hard, but does not fill the same indications as the Cesarean operation in eclampsia.

In the edition of Ramsbotham's "Progress of Parturition," published in 1851, I find there that he cautions against "forcible dilatation of the os uteri by hand, especially if it be rigid," and asserts that it also adds to the number and violence of the convulsions. In this same edition he reports a number of sudden deaths from convulsions, from the introduction of the hand within the womb to remove retained placentas. Of course, where convulsions have ceased after delivery, they may recur, but if a fatal convulsion follows immediately upon the introduction of the hand, the situation is, to say the least, awkward. Now obstetricians do not often introduce the hand to remove the placenta, but express it by manipulations. We should, however, learn from the history of our art.

On June 16, 1909, in consultation with Drs. McAllister and Wyeth, a woman already in convulsions, primigravida seventh month; cervix cartilaginous in consistence, labor not yet set in, the problem of delivery presented itself for immediate solution owing to the grave condition of our patient.

After gentle efforts under chloroform by Dr. McAllister and myself to dilate the cervix and bring on labor, after the manner of Harris, the convulsions continuing, notwithstanding deep narcosis, I advised a resort to Cesarean section as offering the only hope to mother or child. In this I was supported by my consultants. The patient was profoundly unconscious and in almost continued convulsions, and could not be consulted to give her consent, but the family, realizing that death was impending unless delivery should be soon accomplished, readily consented.

Patient was removed to St. Anthony's Hospital and prepared for operation, placed upon the operating table at 7:30 a. m., and in a few minutes an asphyxiated seven-months' developed child was handed to an assistant to resuscitate. In this he was successful. The infant lived five days, and died of eclamptic convulsions due to poisons that almost destroyed the mother. A fibroid tumor the size of the fist presenting, was also removed from the uterus. At

8:30 a. m., patient in her room, the following record was made by the nurse: Pulse 70, temperature 97, respiration 14. Respirations slow, shallow and irregular; stertor profound.

Convulsions returned at 11:15 a. m. and continued at gradually lengthened intervals for the next two days. Patient continued very restless, with slight convulsions at still longer intervals, not distinctly noted by nurse and entered upon her record. The convulsions diminished in severity, but continued until the fifth day.

On the third day an extensive infectious aspiration bronchitis developed. This continued for some time, to the great discomfort of the patient after she regained consciousness, which seemed to occur on the fifth or sixth day after her operation. At midnight after the first day, pulse reached 120 and temperature 103.6, due, I think, to numerous severe convulsions. Temperature fell gradually to the normal in three days, but there was moderate fever movement, due to the extensive bronchitis, til June 20. The wound healed without any difficulty, and, indeed, as far as one could judge, there was not a single symptom that one would not expect in a perfectly simple and normal labor.

In a cervix of cartilaginous character, where dilatation is difficult or impossible by manual means, there is left as choice Dührssen's deep incisions—his so-called vaginal Cesarean section or Cesarean section. Dührssen's methods would better be undertaken only by a competent and experienced operator, and, in addition, he should be a competent obstetrician, because the utmost that can be accomplished by such methods only equals complete dilatation of the cervix, and the delivery must be accomplished by the forces of the mother, aided by her attendants, forceps, version, etc.

In this case I was stimulated to advise Cesarean section by the difficulties met with in another case where I attempted delivery after the methods advised by Dührssen, which was only successful after several hours and a difficult forceps extraction, child stillborn, and mother died of convulsions, which continued on the second day after delivery.

Cesarean section has lost its terrors since its mortality has sunk from 20 per cent. in 1888 to 10 per cent. in all cases, and in cases uninfected by previous attempts at delivery, to 2.5 per cent., which may be considered its normal death rate. As a means of rapid delivery in eclampsia, where there are such obstructions to delivery per *vias naturales* as to cause great delay, with loss of mother and child, I would distinctly advise that

Cesarean section be considered, not as a last resort, but as the best and safest means of effecting delivery, and as offering the best treatment of eclampsia, and the possible salvation of the child if it is viable, and the toxemia not so great as to cause it to perish from convulsions. In this manner no traumatism is inflicted upon the child, as happens after difficult cases of version or forceps.

The clean wound of a knife will also heal as kindly and as safely in the mother, as the brutal use of forcible dilatations or rapid forceps extractions, with deep tears made in our efforts to empty the womb, which is necessary if prompt delivery is to be accomplished in eclampsia.

I will close my paper with the statement that Cesarean section has its place and offers a valuable resource where rapid delivery must be accomplished in eclampsia.

DISCUSSION.

DR. MILES F. PORTER, Fort Wayne:—It so happens that within the last two years I have been rather unusually interested in the study of Cesarean section, and I want to say here, before going further, that it would be impossible for me to conceive of a stronger, clearer, better or more forcible illustration of the wisdom of doctors being guided in these matters by their surgical judgment and wisdom rather than by their worship of fetish and tradition than was given by Dr. Schell in the introduction of his paper. Here is a living mother and child, apparently healthy, without morbidity in either case, as the result, as I have said, of an action based on surgical judgment and reason rather than on the worship of fetish and tradition.

Dr. Schell's experience illustrates another thing, that we need not in our decision to make section in these cases be quite so fearful of exhaustion, or quite so fearful as we have been in the past of some slight degree of infection. Williams, I think it is, has pointed out the fact that even those mothers who are somewhat exhausted, and those who are somewhat infected, or decidedly infected, do quite as well in proportion as the same class of individuals who are delivered by what Dr. Schell has called those "brutal methods," and, let me add, by that absolutely and entirely unscientific method known as *accouchement forcé*. Aside from the life of a mother and the child in this case, we have lost sight very largely of two important factors, and one is the subsequent morbidity entailed by the so-called obstetrical procedures. It is not only true that 50 per cent. of these mothers die and 50 per cent. of these children die under the circumstances we are talking about, but it is also true that 60 per cent. of those who do not die are subsequently invalids because of the forceps, and that more

than 60 per cent. of the children are invalids. A large proportion of the children receive cranial injuries and are permanently disabled, and 30 per cent. of them subsequently become epileptics. Add this to the facts stated by Dr. Schell, and then you have the whole truth of the situation as it presents itself to the profession to-day.

Now, I want to emphasize what Dr. Schell has said about vaginal Cesarean section. It is a misnomer. What does that do? One thing only when done properly, and that is it overcomes the obstacle to dilatation of the cervix and nothing else, and you apply it in comparatively few cases, and in practically no cases of primipara. Now, it is true, so far as we have been able as yet to collect the statistics, that vaginal Cesarean section is followed by a lesser death rate to the mother than is Cesarean section, but this I believe to be only seemingly true, because of the fact that these vaginal Cesarean sections are undertaken relatively early. They are done in cases that are less desperate, and the result is, naturally, no matter if the operations were exactly on the same level, that the vaginal operation would have a little the better of the argument. A close study of the question leads me to believe that the mortality rate of Cesarean section in selected cases ought to be below 2 per cent., and so far as concerns the child no method of delivery gives the child such a good chance to live, nor so good a chance to become a healthy adult.

If we look at this matter in a broad light, I think we will conclude that in the future we can by this method diminish considerably the mortality rate so far as concerns the mother. But we can do another thing, of equal importance, I take it: we can decrease the morbidity so far as concerns the children, and we can rob our institutions of a large percentage of epileptics that we have now. One argument made is that nobody can undertake this but an experienced operator. That is just as true of *accouchement forcé*, and I undertake to say it will take the average man longer, and it will be harder study to equip himself and properly apply the forceps in the delivery of these women than it will to teach himself to become adept to deliver by abdominal section, and it is just as criminal to undertake one operation without preparation, as the other.

I want to close by saying another thing, that now and then, but mighty seldom, will there be a time in this country that a woman need be without experienced aid of whatever kind she may require, no matter where she happens to fall in confinement.

DR. WALKER SCHELL, Terre Haute (closing): I was certainly very much delighted with Dr. Porter's admirable supplement to my paper. I think in the future Cesarean section will be given a place in the operative procedures of the obstetrician, because of the decreased mortality and the decreased morbidity, as Dr. Porter pointed out.

I have myself had severe forceps cases, and I have one in mind where the child is 3 or 4 years old. It is backward in development, is unable to walk well, and it is largely due to a severe forceps operation, and if I could have been wise enough, and if the family could have trusted my advice, I am fully satisfied that the delivery should not have been by the forceps, but by Cesarean section in that case.

SPECIAL ARTICLES

ADVANCES IN SURGERY IN 1909.

No epoch-marking advances have been made in surgery during the year of 1909. Many important developments of established methods have been recorded.

Sufficient time has now elapsed since the announcement by Beck of his bismuth paste treatment of tubercular sinuses to arrive at some conclusions regarding the diagnostic value, the therapeutic efficiency and the dangers attending its administration in the treatment of sinuses and fistulous openings. If by injecting the various varieties of bismuth pastes cases of chronic suppurating and discharging sinuses can be cured, medicine has worked a great advance.

What has been the result at the hands of the profession? The use of bismuth paste as a therapeutic agent is by various observers considered a mooted question. The percentage of cures varies so markedly, according to different writers, that we find some who are enthusiastic advocates, while others deny it any curative properties. Baer says: "I think if we make a dispassionate review of the literature, we cannot but be impressed with the fact that a larger percentage of cases are cured by this agent than by any other method formerly employed: and, although the hopes of some have been dashed in not finding it a cure-all, at the same time it has increased our percentage of cures rather markedly." Beck reports a cure of 57 per cent. (86 cases) in bone tuberculosis. In 31 cases of osteomyelitis a recovery of 65 per cent. And in a total of 192 cases, including bone tuberculosis, empyema, osteomyelitis and various fistulous tracts, recovery in 46 per cent. Ochsner reports cures in 55 per cent. of the cases treated.

Robitshek reported 9 cases, only one of which dealt with bone tuberculosis, and reports a cure in 55 per cent.

Don, of Edinburgh, is a warm advocate in its use as a diagnostic agent. He thinks the treatment is not without danger. He reports a series of cases, with a cure in 17 per cent.

Rosenbach, of Berlin, reports 4 cases, with a cure of 50 per cent. He does not think the method free from danger.

Pennington, reporting on the fistula in ano, reports a cure of 13 out of the 17 cases, or 76 per cent.

Dollinger has had two tuberculous fistulae which healed in a short time, out of a series of 16 cases.

Baer reports four cures out of 12 cases treated, or 33½ per cent.

Joseph Beck, of Chicago, in his work on the treatment of suppurations of the ear, nose and throat, is most enthusiastic as to the effect of the treatment. He reports a series of 319 cases in which there has been complete recovery in 22 per cent.

We see from the above that the treatment varies greatly with the various surgeons.

Don, of Edinburgh, made a suggestion (which had been independently suggested by Dunning, of Baltimore) which seems important. "It is not that the bismuth compounds are impure, but simply that they are more readily absorbed. Is it not possible from the selective action of nitric acid on tubercular and other pathological tissues that the subnitrate, when acted upon by the organic acids, gives up its nitric acid, which attacks the tubercular wall of the cavity and forms a barrier to absorption and to further growth of the tubercle bacillus? That this is the case one would conclude from the speedy improvement that is noticed when treating ulcerating lupus patches with either pure nitric acid or acid nitrate of mercury." Dr. Dunning's experiments to determine the rapidity with which subnitrate of bismuth made by different firms undergoes hydrolysis are very convincing. No two give off the same amount of nitric acid at a given temperature. He found that some of the preparations hydrolyze from five to ten times as rapidly as others. Taking these facts, it seems to me that it is not at all surprising that the results of the various surgeons differ so greatly. Dr. Baer cites the interesting fact that all his cases that were cured were treated at the Union Protestant Infirmary, while at the Johns Hopkins Hospital, in the service of Prof. William Halsted, he did not obtain a single cure.

Baer says: "We may say that the use of Beck's bismuth paste is a great advance in making an accurate diagnosis of the disease and of the direction of and tortuosity of the sinuses. It affords a method of performing our operations with much more hope of success.

"As a therapeutic agent it has greatly increased the percentage of cures in those tedious and trying cases. It is not free from danger, yet with

our increased knowledge of technic this may be reduced to a minimum." I have taken considerable time and space in the consideration of bismuth paste because I believe the elaboration of its use during the year to be of the greatest importance.

The Schlösser method, the injection of alcohol into the second or third division of the ganglion at their emergence from the skull, is still on probation. There is no question as to the immediate relief afforded by the treatment, often from one to four injections, but we have as yet no assurance as to the permanency of the relief. That the treatment is applicable only to the cases in which the pain is referred to, the second or third division, is no longer disputed. Kiliani, in a series of 55 cases, had four failures, and four from which he could obtain no report. The remaining 47 are free from pain, although no mention is made of the period of relief.

Sicard's experience includes 63 cases. He divides his cases into two classes: (1) those which had been treated previously by surgical methods; (2) those which had not. Those in the first category were not half as much benefited by the injection as those in the second.

Jaboulay, in the report of 60 cases where various methods were used, is still of the opinion that the excision of the cervical sympathetic is more lasting in its effect. Of five cases in his series, one has remained free from pain a year, another 26 months, a third 17 months, a fourth case was a failure, and in the fifth case there was a decided improvement.

In a report of 75 cases Hugh T. Patrick has this to say of the operation: The danger of the operation is nearly *nil*. He knows of no fatality. In his 300 cases he has had no deaths. Disagreeable complications are exceedingly infrequent. In a few cases injection of the middle branch has caused a small hematoma which did no harm; and occasionally he has had transient paresis of the sixth nerve. The procedure is not exceedingly painful. He gave gas in four of his 75 cases, and in only one case was it absolutely necessary. There is no shock. Most of his injections were in his office. His patients are able to leave the office within a few minutes. He says: "There is no reason to believe that these injections effect a radical cure." The period of relief is hard to estimate. A good injection, as shown by marked analgesia, may be expected to last from one to three years.

Exophthalmic Goiter.—In conjunction with the parathyroids this subject has been the center of attraction for the laboratory worker, the internist and the surgeon in an endeavor to solve the problem—its metabolism. As regards treatment,

many important articles have appeared, although nothing new has been offered along the lines of surgery, except additional reports confirmative of its advantages. Nothing of importance has been added to our knowledge of the disease. Thompson calls attention to our lack of knowledge, the improbability of the thyrotoxic theory, and believes the disease is due to a poison generated in the alimentary canal which excites the thyroid into activity.

Frazer says, in reviewing the results of Rogers and Beebe with their cytotoxic serum: "Their mortality has been approximately 10 per cent., and I would judge that between 70 and 80 per cent. of the cases treated are reported as cured or improved. Due consideration, however, must be used in considering this method of treatment as a standard, as sufficient time has not elapsed to say whether the large number (50 per cent.) of patients classed as "improved" will progress to a cure or retrogress into the unimproved class or require operation."

Their best results occurred in the very severe acute, or the very early mild cases, and this is important because it is in the former that thyroidectomy may result fatally more frequently than in the other forms, in the absence of organic changes in the heart. The latest surgical reports are most encouraging. Kocher reports 320 cases with 11 deaths (3.44 per cent.) and states that since 1906 he has performed 153 operations, with only two deaths (1.5 per cent.). He remarks that the mortality is not greater than in ordinary goiter, as in the last 600 operations (3,600 in all) he has had three deaths (0.5 per cent.).

Tuholske recommends a new treatment for exophthalmic goiter in place of the usual arterial ligation proposed by Kocher, viz.: ligation of the thyroid veins. He claims the result of the experiment on dogs distinctly demonstrated the success of the procedure, which, in reality, consists in the production of a Bier's passive hyperemia. Tuholske was led to propose this method by observing the experimental work on the vascular system of the dog, done by Dr. Guthrie.

Charles Mayo calls attention to the interesting fact that he has not had a single case of tetany in the 700 cases of goiter operation. He does not believe that it is quite as serious to remove the parathyroid in the exophthalmic type of goiters as it would be in the old simple colloid goiters or adenomas.

MacCallum found that in dogs in which often parathyroidectomy, the most violent tetany, had developed with muscular rigidity, clonic spasm, extremely rapid respiration and pulse, etc., all the symptoms could be instantly dispelled by the

injection of a solution of calcium salt (the acetate or lactate) into the jugular vein. The injection must be repeated and may be given subcutaneously or into the stomach; but the effect occurs much more slowly. Tetany does not often follow the removal of the thyroid.

Frazier, in going over the experiences of 54 surgeons, could find only 8 cases; of these, three were fatal. The total number of operations upon the thyroid gland represented in these statistics is between 1,500 and 2,000 cases.

The suggestion that Halsted makes, that in ligating the inferior thyroid artery the clamp may be plunged into the substance of the gland, seizing the artery after it has disappeared from view, is an excellent one.

Pool describes a somewhat safer method, it seems to me. He suggests that at least one of the thyroid vessels, preferably the inferior thyroid, should not be ligated. This suggestion has proved to be of greater significance since Ginsburg published his observations on the blood supply of the parathyroid glandules. Ginsburg found that there is a secondary accessory blood supply to these small bodies. In other words, that there is an anastomosis between the parathyroid arteries on one side with those of the other, so that if one of the inferior or superior thyroid arteries is left intact the blood supply, not only of the parathyroid bodies on one side, but of those on the other, is preserved. As to the relative importance of the arterial trunks, the inferior thyroid artery is the most important because the parathyroid artery takes its origin in the majority of cases from this vessel.

CANCER OF THE BREAST.

Heile, in a series of cases, has developed a technic, differing from that of Lexer and others, which has given him uniformly good results. By transplanting the pectoralis minor muscle the exposed axillary vessels are covered, and stasis and swelling of the arm are prevented by limiting contraction of the scar. He removes the pectoralis minor when necessary. In the majority of cases, however, this muscle is uninvolved and can be used for transplantation. The pectoralis minor is detached from the ribs, its insertion into the coracoid process is undisturbed, and from its posterior surface all fat is removed. After the axilla is thoroughly cleansed, the muscle is placed over the exposed axillary vessels, where it is held in position by sutures. The transplanted muscle, of course, in time undergoes atrophy, but prevents adhesion between the skin and axillary vessels and nerves during the healing of the wound. The same result that Lexer endeavors to bring about

by his method of extension may be obtained by Heile's plan in a very much shorter time. In going over the mass of articles on this subject I find little that is new or of great importance. Frazier has given some contraindications for operation which I think are good: "(1) fixation of the growth to the thorax; (2) extensive involvement of the skin, either in the form of infiltration or of multiple widely scattered nodules; (3) implication of the axillary vessels or nerves; (4) deposits in viscera or in the bones.

THE LIVER AND GALL BLADDER.

During the past year the pathologists and internists have devoted much attention to the various inflammatory diseases of the liver and biliary passages, so that it looks as if we shall soon have a clearer knowledge of these diseases, and it may follow from this that the surgeons will have an opportunity to cure the patient before he has reached the stage of forming gallstones, instead of being content to remove them after they have formed.

Quenu and Duval have established the fact that infection may reach the liver through the ducts or the blood vessels. The former, until recently, has been considered the usual source of infection, whereas it now appears more probable that, especially in infections due to the typhoid bacillus, the liver becomes involved through the blood vessels during transitory infections of the blood with the bacilli.

Hepatic drainage has received considerable attention during the past year and seems to promise relief in cases of infection of the liver substance.

Hartmann does not believe that hepatic drainage alone is sufficient treatment in cases of acute angiocholitis. It is often impossible to carry it out, and it is difficult to keep a drain very long in the canal. He therefore combines it with drainage of the gall bladder.

Haaster combines hepatic drainage with what he calls a "transhepatic lavage," carried out through a superficial bile duct on the convex surface of the right lobe. He introduces into it a fine tube, such as is used in intravenous injections, and passes into it a stream of hot saline solution. It is true that only a section of the liver is washed out, but in this manner he is able to cause a discharge through the hepatic duct of seropurulent liquid and small calculi or biliary sand and thick brown bile. He does not recommend this drainage for all cases, but rather for those in which there is a special obstruction.

CHOLECYSTITIS WITHOUT GALL-STONES.

Riedel reports six cases with inflammation of the gall bladder and biliary passages without the formation of gall-stones. He believes the inflammation in these cases was hematogenous, and not by direct extension from the intestines. The pain commenced in the gall bladder, and jaundice was a later symptom. The essential of treatment is the drainage of the gall bladder for a long period. The removal of the gall bladder is worse than useless in such cases.

CHRONIC INFLAMMATION OF THE LIVER.

Koch, in a recent article, "Surgical Treatment of Cirrhosis of the Liver," says: "It has been found both experimentally and clinically that omentopexy can relieve impaired venous circulation resulting from obstruction or stricture of the portal vein. It can also relieve ascites and the gastrointestinal hemorrhage which occurs in atrophic cirrhosis. Drainage of the gall bladder exerts a favorable influence in cases of hypertrophic cirrhosis."

PANCREAS.

The diseases of the pancreas are, at the present time, being subjected to an ever-increasing amount of clinical observation and to experimental research of the most varied forms. Especially is this true of acute pancreatitis, a disease which in its several varieties touches upon some of the most important problems with which the abdominal surgeon and the physiologist of to-day must deal.

John B. Deaver, in a recent paper, reports six cases of acute pancreatitis, and gives his method of operation and the after-care of the cases.

Sixty-seven per cent. of his cases had gall-stones. It is noteworthy that in but three cases in which gall-stones were found there was no stone in the choledochus. He says: "I have a number of times found chronic pancreatitis associated with a stone in the common duct."

Deaver's experience as regards biliary calculi, coincides with that of most authors. The only investigator of prominence who disagrees with these conclusions is Truhart, who, in an analysis of a large number of cases, found that a smaller percentage of patients with acute pancreatitis had gall-stones than those who died from other causes.

Fitz, Opie and most American and British authors are inclined to the belief that the causative factor in acute pancreatitis is most often some form of infection, while Chiari and his followers incline to the theory of a chemical auto-digestive process.

Deaver drains the affected part of the pancreas. He mentions an important point against the use

of gauze. He says: "It is almost unnecessary to mention the fact that gauze drainage in all these cases must be supplemented by the use of the tube drains, preferably the rubber ones of large caliber. Drainage by gauze tampons alone often defeats its own object, the saturated gauze acting only as a plug and not as an outlet."

Wohlgemuth has, by experiment and also clinically, shown that by placing patients who have been operated upon for pancreatitis upon a typical antidiabetic diet we can so alter the pancreatic secretion that it becomes less active and irritating. This fact is abundantly confirmed by other observers. Not only this, but by the same use of diet the healing of both recent and old pancreatic fistulæ is accelerated.

It is a most difficult task to know when to stop in such an article as this; there are so many things of importance that I have not touched—transplantation of bone, suspension of the kidney by its ligaments, stomach surgery, adhesions following abdominal operations and, in fact, an hundred and one other questions of interest.

EDMUND D. CLARK, M.D.

Indianapolis, Jan. 1, 1910.

THE PROGRESS OF INTERNAL MEDICINE DURING THE YEAR 1909.

PSYCHOTHERAPY.

The year 1909 has to the average internist brought some new experience and ideas in faith-healing, and also some new thoughts in the practicability or value of psychotherapy.

Has the possibility of legitimate medicine been fully appreciated by the internist? How few practitioners profess any skill or knowledge of the essential facts and beliefs of psychology or psychotherapy? The average medical school gives no thought, much less any instruction, on this very important subject, the lack of which is taking an enormous number of valuable and responsible people from the influence of legitimate medicine. However much we may loathe the thought, Christian science takes from the field of legitimate medicine many who go much against their will and better judgment, and only because the man engaged in regular practice is so sure of the thoroughness and unquestionableness of his scientific methods, that he gives little or no thought to pleasing the finer sensibilities of his patient.

It is absurd to say of one who accepts Christian science that he is crazy, and that you do not care if he has, for you do, or should, at least. Too often the cause of our patient's transgression is our own fault. What does Christian science do

but establish a hopeful and peaceful mental condition and convert a false religious enthusiasm into a moving force? Why not look at the situation impartially and honestly? How much damage is done by careless or imperfect diagnoses, and how much more credit might be brought to the science of medicine by greater honesty in using established diagnostic methods.

How often we fail to give our patient that sympathy and honest attention they have a right to expect; and how often we fail to anchor the mind of our patient only; because we make no effort to cultivate that power or persuasion so essential to the control and comfort of our patient. How many mentally or physically weak from illness do we see, who with the least effort on the part of the physician could be practically narcotized by a simple though perfectly dignified word of sympathy or closer attention.

Better diagnosis, closer cooperation between the internist and surgeon, greater frankness in expression and more tactful management of the sick mind, supported on the broad foundation of advancing medical science, would soon relegate our greatest tormentor—Christian science—alongside that medico-religious freak, born in 1907, of a few clergymen, who, having made a failure in their calling, essayed, "like Christ, to become a physician," and by adoption, or voluntary enlistment, associated with them and their cause, a few well-educated legitimate practitioners, who, as Oliver Wendell Holmes said of gin, "possessed more energy than judgment," and launched upon the innocent, though longing public, the so-called Emmanuel Movement, which has already been classed in the annals of ancient history.

THERAPEUTIC USE OF CALCIUM SALTS.

One of the great achievements of the past year must be credited largely to physiological chemistry, the principal value of which seemingly is to prove of such material benefit both to the internist and the surgeon.

It seems to be a well-established fact that tetany, or tetanic symptoms of different origin, are the result of profound disturbance of the calcium metabolism, especially marked and active in the central nerve system. That there is a loss of the normal proportion of calcium salts in the nerve cells is shown by the promptness and constancy with which the tetanic state abates after the administration of soluble calcium salts by either intravenous or subcutaneous injection, or when administered by the mouth. The quieting effect does not last more than twenty-four hours, when the dose must be repeated. This is particu-

larly true in the so-called spontaneous tetany, which is usually of gastric origin, although in this, as in other varieties, the exact pathogenesis is as yet not well understood.

The part played by the parathyroids in this metabolic process is of interest to the surgeon especially, as the parathyroid secretions in some way control the exchange of the calcium salts in the nerve cells, and when the parathyroid secretion is, by the gland's removal, withheld from the system, the calcium salts forms an unnatural combination in the organism and is extracted from the body, with consequent excitability of the nerve cells and tetanic symptoms, which manifestations of nerve irritability promptly subside after the restoration of the normal amount of calcium salts. This has been experimentally proved to be equally true when the tetanus is of surgical origin, due to the removal of the parathyroids, or spontaneous, as seen most often in gastroectasis.

It has been clearly proved that the administration of the parathyroid extract (nucleo-proteid) is of little value in controlling tetanic symptoms, except when administered in connection with calcium salts.

RETINAL HEMORRHAGE IN PERNICIOUS ANEMIA.

The frequency with which the general practitioner has to make an early, yet correct differential diagnosis between pernicious anemia and the pernicious types of anemia secondary to gastric ulcer, latent tuberculosis or malignant neoplasms, makes one welcome anything new. The constant presence of retinal hemorrhage recorded by Hesse, who found in the genuine type of primary pernicious anemia hemorrhages of varying size in forty-seven out of fifty cases, while in the pernicious forms of anemia, secondary to latent organic diseases, he found no retinal hemorrhages in fifty-one patients with hemoglobin below fifty, and none in one hundred and twenty patients examined with a hemoglobin varying from fifty to seventy. While the presence of such hemorrhage cannot be regarded as pathognomonic, yet their presence in forty-seven out of fifty cases is valuable information, adding a mite in the making of a correct diagnosis, when one recalls how close is the resemblance in the clinical picture of the two conditions.

Frequently the anemia is the only outward manifestation of a latent organic disorder, and its presence may not appear as a factor in the illness, except on the post-mortem table. Often the characteristic blood picture of pernicious anemia—at present largely depended upon for a positive diagnosis—may not appear until very

late in the course of the illness, when already much doubt and confusion may have developed in the mind of a good diagnostician.

OPTIMISM IN VASCULAR DISEASES.

Dr. William Russell, of Edinburgh University, is the first to boldly throw a life line or a word of encouragement to the poor unfortunate fellow suffering from "disease of the arteries." Dr. Russell, speaking from a wide clinical experience, based on long training in pathology, cannot but command one's confidence and belief in what he might say. First, he explains to the practitioner of medicine the difference between blood pressure and arterial tension. Blood pressure, high or low, should be regarded as normal or physiological to the individual at the time and under the conditions, and suited to the requirements of his organism.

Arterial tension is of much greater importance. First, it is more difficult to determine, and for safety or longevity should not exceed the capacity of the vessel wall. When we consider the relative strength of the cerebral and peripheral arteries of the extremities, we get some idea of the need for consideration when selecting a drug, or prescribing exercise, active or passive, that will be safest and yet give the best results. In reaching conclusions as to the extent of diseases of the arteries and the indication for treatment, Russell says that instrumental means of examination are not so reliable, and should not replace the skilled finger. The use of both would be the ideal, yet if one alone is to be used, let it be a trained finger.

The importance of vessel sensitiveness seems a most timely discussion. The physician with common practical sense and good judgment in the field of medicine cannot but have had his attention attracted to the innumerable experiments and reports of changes induced in the walls of the arteries by various experimenters, whose findings are too often made to satisfy their prejudices, rather than to materially or practically serve the physician engaged in active practice. Who to-day, engaged actively in practice can regard seriously all the findings, or accept unqualifiedly the deductions and recommendations made from experiments on "rabbits," and feel in the selection of a drug that he is acting intelligently, knowing that its capacity for good, or evil, has been tested no further than on the delicate tissues of the vascular system of a "rabbit." Poor bunny's aortic arch shows the required degenerative changes, appearing early or late, as the case may require, and, unfortunately, responds uniformly to every experiment, from a simple diet to dynamite. The latest, this poor innocent thing, doubtless much

against his will, has been smoking, with no statement on the vital point as to whether his host served him with clear Havanas or domestic; but true to his reputation his aortic walls were, as a result of a short dissipation, hopelessly degenerated in less than forty-eight hours.

The great flood of literature of the past year or two on arteriosclerosis is full of the most veritable nonsense, and as practitioners familiar with the influence and significance of heredity, acquired predisposition and variability normally in the texture of the arterial system, know that fundamental, physiological and anatomical facts should not be replaced in our minds by faulty theories.

Stress has been laid very properly on the evil influence on the arterial system of the subconscious reflexes, the evil effects of which are seen so often in men carrying heavy responsibility in a quiet mannered way, yet whose vascular system is prematurely broken.

Russell emphasizes the power of compensation inherent in the arteries themselves, even though rather extensively diseased. The arteries may still possess great functional capacity, and with proper care and management a person with advanced arterial changes may enjoy a great longevity. That it is a mistake in those with sclerosed arteries to attribute all their aches and pains to this condition, or to condemn such a man to chronic invalidism. He also insists we should not stop, as has been done heretofore, with the simple statement that the peripheral capillaries are primarily contracted as the first step in producing arteriosclerosis, and less frequently atheroma. Such a contracted state is not due primarily to disease in their walls, but to a poison or a toxin circulating in the blood, which, when recognized before organic changes have developed, can in many cases be removed.

NOGUCHI'S VS. WASSERMANN'S METHOD IN DIAGNOSING SYPHILIS.

Because of the practical advantages resulting from an early and positive diagnosis of syphilis, the internist should welcome such a valuable method of diagnosis of syphilis as that given to us by Wassermann; whose method, while most valuable as an aid in diagnosis has been altogether too complicated and technical for use, except by those thoroughly trained and working in well-equipped laboratories, those working outside of laboratories, though competent enough, have frequently made errors with this method when a correct diagnosis was most essential.

Noguchi has developed a method seemingly more sensitive and quite as accurate as Wasser-

mann's, yet simple enough to be correctly applied by anyone at all experienced in blood examination.

Noguchi's method first requires only a small amount of blood, and its second and chief value is that he uses the antihuman hemolytic system, instead of the antisheep system, thereby requiring no foreign blood culture. The reagents, consisting of antigen, amboceptor and complement, are prepared in the form of reagent paper slips, which are fortunately quite permanent. This method of Noguchi's by comparison gives not only more positive reaction in subjects infected with the spirocheta, but practically no doubtful reactions, which is not true of Wassermann's.

There are many other methods of serum diagnosis of syphilis, but none, so far in simplicity and practicability, equal Noguchi's. The serum diagnosis of syphilis is of inestimable value to the internist, as it offers a reliable means of making early positive diagnosis in those cases where the clinical or secondary manifestations are wanting or are very insignificant. Also in the later manifestations of the vascular system, the serum method of diagnosing syphilis not only suggests an intelligent therapy, but aids materially in the etiological diagnosis of diseases resulting fromluetie infection, especially spinal cord lesions and aneurism of the aorta.

PELLAGRA.

Pellagra, although a disease long known and fairly well understood on the Continent of Europe, particularly Italy, is just now occupying the attention of the profession in the states as much as the hook-worm disease. This is largely because of its prevalence and great number of fatalities attending it. In some of the southern states the death rate from this disease among the colored race is second only to that of tuberculosis.

The exact etiology of the disease is as yet not entirely understood, but it is generally regarded as being neither contagious nor infectious. Its origin is most likely due to the ingestion of some toxic substance derived from the eating of Indian corn as a food, although the disease was recognized on the Continent before the importation or use of corn.

This ailment obtains in two forms—the acute or fulminating and the chronic or recurrent. The first is, as a rule, rapid in development, running its course in three weeks to three months. Gastro-intestinal disturbance is a very marked feature in this variety, and is usually accompanied by quite a little fever. In the chronic form the erythema appears before the digestive disturbance, and is located on the back of the hands and wrists, the neck, face, sternum and the dorsal surface of the

foot of those who go barefoot. The skin lesions in some cases amount to a real atrophy, with cicatrization and pigmentation. Activity, especially in the skin manifestations, is likely to be more pronounced in the spring of the year, being more or less latent or entirely disappearing during the other months.

The diarrhea, stomatitis, and in women, vaginitis and dermatitis, show that the disturbance is a general one. The extent and severity of the skin lesions in a given case is no indication of the gravity of the disease. The blood picture does not show evidence of an acute infection, although nucleated red cells are found at times, even though the hemoglobin percentage be quite normal. Nerve symptoms are often among the early manifestations.

In the chronic form, marked degenerative changes in the column of the spinal cord are quite the rule, and frequently there is a very marked mental disturbance. The exact relationship between pellagrous insanity and insanity as a predisposing cause to pellagra, is not clearly established, although the two are quite constant in their association. Certain it is that melancholia, suicidal mania and great restlessness are quite common manifestations in patients suffering from the chronic variety of the disease.

The prognosis is very grave, there being practically no recoveries from the acute fulminating form. Most patients suffering from the chronic variety ultimately succumb to an acute exacerbation. So far there is no specific medication, although great claims have been made for hydrogen dioxid in the treatment of acute cases. In the chronic form proper hygiene and diet, with tonics, give relief. Entire withholding of all corn from the diet is essential. It has been repeatedly observed that a return to the use of corn frequently causes an outbreak when the disease was apparently cured or had been indefinitely latent.

THE EARLY DIAGNOSIS OF TRICHINIASIS.

One of the greatest successes in diagnosis has been attained in the clinical laboratory the past year, in the actual observation and demonstration in the human subject of the route and distribution of the embryo trichinella spiralis from the intestinal tract to the muscular tissue. This confirms the claims of Strübli, who last year reported the recovery of the trichinella embryo from the right heart blood of infected guinea-pigs in all cases examined.

His method consists in laking the blood drawn from the heart with a 3 per cent. solution of acetic acid, the solution itself being centrifugalized. Later he was able to demonstrate the same

findings in the blood drawn in small quantities, from the ear of infected guinea-pigs, thus proving the practicability of this method of diagnosis, and that large quantities of blood were unnecessary.

Herrick and Janeway, working together, discovered in the same subject the trichinella embryo in the blood drawn from an arm vein prepared after Strübl's method. The patient was an adult. The blood of three children who were exposed to infection at the same time and presented a typical clinical picture of trichinosis, gave negative blood findings. They were unable to demonstrate the presence of a parasite in dry smears, stained by either methylene blue or Wright's method, but in the freshly drawn blood diluted with acetic acid the demonstration was easy and constant twenty-three days after infection and ten days after the appearance of the first symptoms. Their presence was again demonstrated three days later. The trichinella embryo was not found in the blood examined from children, ages 4, 8 and 12, who had eaten of the same meat and presented unmistakable symptoms of trichinella infection.

This demonstration, while very limited, leaves no doubt as to how the parasite is distributed throughout the muscular system, and with a little more perfection of technic in the method of examining the blood, one experienced in blood examination will be able to make an early and positive diagnosis in a much less painful way than the removal of a section of the muscle, which too often does not reveal the presence of the parasite in cases presenting a positive symptomatology of infection.

VACCINATION AND TYPHOID FEVER.

The control and prevention of most infectious diseases has been advanced in a marked degree, largely through the influence of those engaged in work of health and hygiene. There still remains one disease which is much dreaded when people are brought into crowded relations, as children in school or men in military field camps. In the last instance the difficulty of properly disposing of the sewage, and the fact that there are almost always a few isolated cases of typhoid scattered over the rural districts, makes simple hygienic measures inefficient as a rule in military camps; and many a soldier has fallen in deadly combat with only a typhoid bacillus.

England in the Boer war had 31,000 cases, with 5,877 deaths. Germany, alone, in the Franco-Prussian war had 73,396 cases, with 8,787 deaths. Sixty per cent. of their total deaths was due to typhoid. In the Civil War, the North had 80,000 reported cases, and doubtless many others not

correctly diagnosed. In the Spanish War, in an army of 120,000, we had 20,730 cases, with 1,580 deaths. These figures certainly show urgent need of some better protection against this disease.

Sir A. E. Wright, getting the suggestion from the success in the management of epidemics of cholera, in 1896, tried preventive vaccination in typhoid in two cases; the following year he experimented on and reported eighteen more.

Experience has established the facts that inoculation into the human body of killed—although the live ones have recently been used—typhoid bacillus is first entirely free from injurious effects, except some local pain and sometimes a slight febrile reaction. The length of prophylactic influence, resulting from such vaccination, has not yet been established.

The *Journal of the Royal Army Medical Corps*, 1909, reports the following: Out of a total number of soldiers of 5,473 who were inoculated with the killed typhoid bacillus, 21 had the disease, of which 2 died. In a like number of soldiers placed under similar conditions and subjected to the same exposures, none of whom were vaccinated, 187 suffered from typhoid, of which 26 died. The experience of Germany in southwestern Africa, reported in the *Military Surgeon* of 1909, shows for 1,000 strength in the unvaccinated 98.4 per cent. of cases, the death rate equaled 12.6 per cent., while in the vaccinated there was a percentage of 50.9 cases, with a death rate of 3.3 per cent. The report is of further interest, as it shows that among the vaccinated cases the percentage was distributed as follows:

	Per cent.	No. of Cases. Per cent.	Deaths. Per cent.
Cases receiving one dose.....	21.1	63.7	7.1
Cases receiving two doses....	61.6	48.1	2.2
Cases receiving three doses...	27.3	47.9	1.3

Military authorities, who, with the advantage of thorough discipline and greater opportunities for observation of their subjects, should be able to arrive at a more accurate conclusion than would be possible in hospital or private practice.

Various preparations of antisera, filtrates of non-poisonous parts of the bacilla and inoculations with typhoid bacilli, in doses of varying sizes, have been employed. The best results seemingly come from the use of repeated and large doses, from three to eight million bacteria being administered hypodermically at one time. Some, experimenting on a large scale, have not reported such constant and marked immunity, but all are agreed that those stricken with the disease after having been vaccinated have milder symptoms, that the mortality rate is much lower, although, strange as it may seem, the length of illness is

not shortened. The government of the leading nations will spare neither time nor money in rapidly perfecting this method of prevention. As yet, it is not compulsory in the army, although both England and Germany strongly urged it for all new recruits and soldiers going into field camps. Doubtless when this method of prevention is better understood, it will be made compulsory among soldiers.

HOOK-WORM DISEASE.

The hook-worm disease, while not new in the States, illustrates the tendency to look too far away. While sympathizing with our foreign brother in his misfortune from this insidious disease, we are astonished to know we have the same thing and a greater number of cases right in our own home country. Scattered throughout the southeast and southern states are more than 2,000,000 cases, not only contributing largely to the death rate, but rendering many adults and children incompetent, both physically and mentally.

To Dr. Charles W. Stiles, now of the Marine-Hospital Service, belongs largely the credit for our knowledge of this disease in America. Being of such great economical importance and its nature so well understood, there can be no doubt it will be both promptly and successfully handled, if not ultimately stamped out.

Poverty and pellagra is an old story, but in this instance it is poverty, plus the negro, and uncinariasis. The presence of both filth and ignorance suggests at once its parasitic nature. This disease, like pellagra, is of such vital importance and so widespread that the government no doubt will lead in the fight for its extinction. This can be accomplished much more readily if the officials of the public schools, particularly in the villages and rural districts, would provide better means for the proper disposal of fecal matter, and if the ministers of the country churches throughout the southern states would use their influence to encourage the construction of proper privies, the work would be greatly facilitated. Perhaps if that dear good bishop, who was so incensed at the offer of Mr. Rockefeller, would lay aside his red flag, swallow some of his false pride and do a bit of missionary work, he would realize, for a time at least, that he might preach to advantage that cleanliness is next to Godliness. In the districts most infected it was found that only one house out of every three had a privy at all, and many of those that had were very imperfect and offered no protection whatever. As soil pollution is the chief source of infection, the ovum and larvæ of the hook-worm having been found in

great numbers in the soil where the disease was most prevalent, it at once becomes apparent that proper disposition of the fecal matter is of first importance.

While the negro seemingly is quite immune from the awful effects of the parasite, he is the chief habitat and distributor of the hook-worm, although many of the lower animals, especially the dog, carry this parasite. A previous attack in no wise renders one immune to subsequent attacks, and this will make the control of the disease much more difficult.

Anemia, progressive and of the pernicious type, with marked mental apathy and lethargy, is the chief and constant clinical symptom. The route by which the parasite enters the system is through the skin and the gastro-intestinal tract, operating chiefly on the mucous membrane of the upper small intestines. Cases not too far advanced respond quite favorably to treatment; advanced or chronic cases are difficult to control.

While there is no specific medication as yet, thymol, when properly administered in large doses, seems, in cases not too severe or advanced, to destroy the parasite.

A. C. KIMBERLIN, M.D.

Indianapolis, Jan. 1, 1910.

PROGRESS OF BACTERIOLOGY AND PATHOLOGY FOR 1909.

The work in bacteriology and pathology during the past year has been so great that it is impossible to more than briefly review some of the more striking advances along the lines which appear to be of most practical importance to the practicing physician. I think it can be truly said that, although there have been no epoch-making discoveries or spectacular researches into untrodden fields, yet the further knowledge which has come from careful investigation into already open questions has served not only to broaden our conception of the normal and abnormal processes in the living body, but also to show us the practical application of principles which at first seemed ultra scientific and of problematical value. The order of advance has covered ground that must be of interest to every man who believes that true progress in the science of medicine must be based upon scientific principles. Following this line of thought, one of the greatest books of recent years is Adami's work on pathology. Throwing aside all the conventional methods of handling his subject, he has written a book on entirely new lines, basing his conclusions as well as premises on scientifically established facts. The

result is a work of wonderful brilliancy and value, written in a most charming manner, which cannot fail to reconstruct many of our ideas and conceptions of both normal and abnormal cellular activity. One cannot help feeling that this book must mark a new era in both the study and the practice of pathology.

In bacteriology the work may be roughly divided into that which pertains to the infectious diseases from a therapeutic standpoint and that which deals with prevention of disease through sanitation and hygiene. Under the first division the work on bacterial vaccines has received much attention, especially in the production of so-called "autogenous vaccines." It seems to be clearly established that Wright's original conclusions were in the main correct, although the study of the effect of the vaccines by the opsonic index is to a great extent abandoned. Assuming that it is generally accepted that infections by the pus-producing organisms can be successfully treated by the injection of dead bodies of the specific bacterium, especially in the chronic types of infection, the more recent work has broadened the field so that pneumonia, leprosy, typhoid and tuberculosis have recently been reported on favorably. It is yet too early to say definitely whether these results will stand the test of continued trial, but the experience in the other diseases renders the outlook hopeful. One series of cases of pneumonia shows a great reduction in the death rate from the use of a vaccine made from the affected lung by aspiration. Another author has noted a marked improvement in a single case of leprosy treated by injections of an emulsion made from an excised and incubated leprous nodule.

In gonorrhea the use of vaccine treatment appears to give good results when the disease is in the chronic stage. In the acute stage the reports are not favorable. In joint involvement, however, it seems very effective, especially when the vaccine is made from gonococci, cultivated from the case under treatment. The commercially prepared antigonococcic serum seems of less value.

A great deal of work has been done in connection with the use of various preparations of tuberculin, both as a diagnostic and curative agent.

An extended controversy has waged as to the relative merits of the cutaneous and ophthalmic tests for the early diagnosis of human tuberculosis and the points under discussion cannot be said to be fully settled as yet. The bulk of experience seems to indicate, however, that the Calmette ophthalmic reaction is the most reliable, in that it shows by a marked reaction that there is an active focus of tuberculosis infection present,

while the cutaneous reaction indicates either an active or latent focus, the severity of the reaction being in inverse proportion to the severity of the disease. This latter factor is considered by some writers to make the test more valuable than the ophthalmic where the reverse is the case, on the ground that it is only in the trifling infections that the aid of such tests is necessary. It is well established that either test is safe and reliable, and that either or both should be used more generally, as an aid to early diagnosis.

In the treatment of tuberculosis the tuberculins, especially the T. R. and the watery extract, are assuming a very important rôle. Reports from sanatoria and others engaged in the work show by careful analysis that this form of treatment is giving decidedly good results. Autogenous vaccines used in cases of tuberculosis with mixed infection are also giving splendid results. Marmorek has recently made use of antituberculosis serum made by injecting a horse with tubercle bacilli from the margin of a culture, thus obtaining more virulent and vital forms. It is too early to report definitely on its value, but in one case reported by Hemsted it acted with wonderful effectiveness in a case of acute miliary tuberculosis of great severity.

Three methods have been used in the treatment of pneumonia, one by means of an autogenous vaccine, another by leucocytic extract, a third by injection of large doses of camphor oil.

The first method is very ingenious. The cultures of the pneumococcus are obtained by injecting into the pneumococcic lung by means of a hypodermic syringe, a small quantity of sterile broth, and then withdrawing the same with its admixture of blood and pneumococci. The mixture is then incubated and a vaccine prepared, which has given unusually good results in the hands of its inventor, reducing the mortality in a series of twenty-four cases and hastening the crisis materially (Wilcox and Morgan). The second method, that of injection of leucocytic extract, is based upon the fact that the successful invasion of the body by the pneumococcus is due to the fact that the blood is lacking in complement rather than immune bodies, and that an artificially prepared extract of leucocytes will supply the deficiency. The analysis of cases so treated in their hands shows a great reduction of mortality; in a series of forty-one cases the percentage of mortality was only 12.2 per cent., as against 21.8 per cent. in cases not so treated.

The third method is advocated by August Seibert, and depends upon the germicidal effect of camphor oil, for which he finds patients suffering with pneumonia to have a marked tolerance. By

its use in large doses (12 c.c. of 10 per cent. oil of camphor injected subcutaneously every twelve hours), he claims to have obtained remarkably favorable results.

One of the more recent developments of vaccine therapy is the treatment of ordinary nasal and bronchial "colds" by autogenous vaccines. Two organisms especially are shown as causative factors in colds, *M. catarrhalis* and *M. paratuberculosis*, vaccines made from which produce a curative effect, especially in cases of so-called chronic colds.

The reports of results from the use of Flexner's antimeningitic serum as they accumulate indicate a very decided curative action in this dread disease. Especially is this the case if used early in the course of the infection. The results thus far in the epidemic now raging in France seem to confirm the experience of physicians in this country as already published.

Several new diagnostic methods in the nature of serum reactions have come into prominence during the past year. Most notable of these is the Wassermann test for syphilis. This in its original form was so complicated and required such elaborate equipment and technic that it could only be considered practical in the hands of those expert in the work of immunization. Recently, however, the technic has been so simplified that it can now be easily handled by any careful laboratory man. Noguchi's method is perhaps the simplest, but data is yet lacking as to its comparative reliability. Alexander Fleming has devised a method, both simple and effective, which requires for the test, beside the blood serum, only an emulsion of heart, sheep's corpuscles and normal salt solution. Data from all nations gives testimony as to the material aid to diagnosis obtained by the use of the Wassermann test, especially in obscure cases. It seems fairly well demonstrated that treatment modifies the reaction so that it probably disappears completely when cure is effected. If this proves to be the case it offers a very valuable check on treatment, and will render unnecessary a too prolonged course of specific medication.

Among laboratory tests one of the most striking is the demonstration by Gasis that the tubercle bacillus alone, of the acid-fast group, is also alkali-fast. On the basis of this fact he has originated a new staining method which is easily applied and very satisfactory. The specimen is stained with a strong solution of eosin, decolorized with an alkaline solution and counterstained with methylene blue. The tubercle bacillus retains the red color of the eosin, while every other organism is decolorized. This serves to differentiate

this bacillus from the *Smegma bacillus* and from others of the acid-fast group.

In this connection we must note that Rosenberger's work showing the presence in the circulating blood of tubercle bacilli in practically all cases of tuberculosis has not been confirmed by other observers. His conclusions were based upon faulty technic.

Various other advances in bacteriologic technic, which are of use only to the laboratory workers, need only be noted in passing. Among these is the isolation of the typhoid bacillus by means of China green and the separation of various forms of bacteria from fluids by the passage of an electric current through the fluid with the accumulation of the organisms at one or the other pole, depending on the chemical constitution of the fluid and the kind of bacteria.

Koch's monograph on his studies of the trypanosoma gambiense and its relation to sleeping sickness has recently been published and shows some interesting new data. It appears that the glossina palpalis, carrier of the trypanosome, feeds chiefly on crocodile blood, and is only found in the neighborhood of water, whence it does not travel far. Hence, the best method of stamping out the disease is to attempt to exterminate the crocodile and clear away underbrush near the streams, as well as to educate the natives to fight the fly itself. The new arsenical preparation, atoxyl, has shown great curative properties when administered over a long period of time. Much attention has been directed toward the study of other insects as carriers and infective agents in the transmission of disease. Fleas are the principal carriers of the plague bacillus, and it is possible that they are also concerned in the transmission of leprosy, as lepra bacilli have been found in their intestinal tract, and it has been shown that they defecate at the time of biting, leaving a small amount of feces near the wound into which the germs can be readily rubbed or scratched.

Much attention has been given to the work on the *Uncinaria Americana*, or hookworms, in its relation to the "poor whites" of the South. This class is generally infested with the parasite, and the demonstration of the fact that the ova and larva may infest the soil and enter the body through abrasions in the skin renders the prevention of this condition a matter of extreme difficulty.

The subject of pellagra is now being investigated, and we may look for much new knowledge in the near future.

The hemolytic power of the blood of persons afflicted with carcinoma was thought to offer a means of diagnosis of deep-seated growths, but

practically is of problematic value, as so many other conditions produce the same phenomenon.

In the above synopsis we have endeavored merely to indicate some of the more interesting investigations, and have by no means covered the ground even superficially.

HENRY R. ALBURGER, M.D.

Bloomington, Ind., Jan. 1, 1910.

SUMMARY OF THE YEAR'S WORK OF THE INDIANA STATE BOARD OF HEALTH.

The health law commands that the statistical year of the State Board of Health shall be the calendar year ending December 31, while the fiscal and business year shall end September 30. It is therefore impossible, at this time, the statistics not yet received, to give a summary of births, deaths and diseases for the year. Yet enough is known to warrant the statement that the birth and death rates are not materially changed from the preceding year. Smallpox has been reported in the state each month of the year, with only 5 deaths to date. It still exists, generally in mild form, and the people seem not to fear it. The most marked epidemic occurred in Fort Wayne in October. The cases numbered 40, with no deaths, and a court judgment was given that the board of health had power to compel vaccination. Diphtheria and typhoid fever have been more prevalent than in the preceding year. The diphtheria deaths numbering 209 to November 1 and in the same time in the preceding year 188. The typhoid deaths numbered 659 and in preceding year 602.

The most important and most difficult work of the State Board of Health is the collecting of vital statistics. The full cooperation of the medical profession is necessary to make such collection successful, and why this cooperation is refused by some practitioners is a question that is hard to answer. As vital statistics constitute the bookkeeping of humanity, a matter of greater importance than the bookkeeping of our dollars, it seems that laity and profession alike would attend to the same with great care. The worth of vital statistics to medical science, to society and to the individual are apparent, and the practitioner who refuses or neglects to obey the statute and make prompt reports neglects a duty which marks him as deficient.

BOARD MEETINGS.

The board has held four regular and seven special meetings. At the same, special reports

of the secretary concerning sanitary problems were considered and passed upon, and also numerous reports of the pure food and drug inspectors and laboratory reports were considered.

The secretary, besides the routine executive work and correspondence attended to, made 51 special visits. These visits were because of invitations and some urgent requests of the people for help and advice in sanitary matters. Thirty-two schoolhouses were condemned by the board as insanitary and new ones have been or will be constructed to take their place. To the matter of school sanitation the board has given particular attention, for it is evident that the school children should have school surroundings which will further efficiency and health. The tuberculosis exhibit of the board has been shown at thirty-two places and visited by over 20,000 people. The board regrets that at these exhibits it is impossible, on account of lack of funds, to distribute more antitubercular literature. The appeal to the legislature for a small appropriation for this purpose was refused, but an appropriation of \$15,000 was granted for protecting bees and plants. In connection with the tuberculosis exhibits, the secretary delivered twenty illustrated lectures on the prevention of tuberculosis, and during the year has spoken upon health subjects before twenty-nine high schools, besides giving fourteen health talks before teachers' and farmers' institutes and five talks before women's clubs.

A conference of the municipal and private-owned water plants with the State Board of Health was held at Indianapolis July 8 and 9 for the purpose of studying the sources of water supply in Indiana, their preservation and purification and to establish standard and uniform methods of analysis. The conference was largely attended by superintendents of municipal and private-owned plants.

WORK OF THE BACTERIOLOGICAL AND PATHOLOGICAL LABORATORY.

Every year since the establishment of this laboratory there has been a steady growth in the amount of work done. The year which has just closed is no exception to the rule. Although the increase in the number of specimens examined is not so great as in previous years, there has been growth of a very substantial sort. The total number of specimens examined in the twelve months ended October 31 was 7,951. In all classes of specimens except throat cultures there was an increase of from 10 to 15 per cent. over the number examined last year.

Tuberculosis.—During the year 3,458 specimens of sputum were examined for tubercle bacilli. Of

these, 814, or 26.5 per cent. were positive. There was little variation in the number of specimens of sputum received from month to month. Tubercle bacilli were found in several samples of urine and once in the discharge from the ear in a case of otitis media.

Diphtheria.—The total number of throat cultures examined for diphtheria bacilli was 1,445, of which 426, or 29.4 per cent., were positive. The average number of positives per month from May to August, inclusive, was 11, while the average for the remainder of the year was 48. Among 309 positive cases there was a definite history of exposure in only 70, or 22.6 per cent., and no known source of infection in 152, or practically 50 per cent. Of 301 cases diagnosed diphtheria by the attending physician, diphtheria bacilli were found in only 162, or 53.8 per cent.; of 325 cases pronounced not diphtheria, these organisms were found in 88, or 26.2 per cent.

Typhoid.—Of the 1,508 Widal examinations made during the year, 337, or 22.3 per cent., were positive and 1,171 negative. The standard advised by Wilson is used, namely: All bacilli in the hanging-drop must have been completely immobilized and practically all of them drawn away from the margin and collected into large clumps within an hour and a half.

In April the urine and feces of sixty-four ex-typhoid patients in the State Reformatory at Jeffersonville were examined to determine if any chronic typhoid bacilli carriers were present. Specimens were examined only on one day and all proved negative. A typhoid epidemic at Greenfield, Ind., was investigated in October. No definite source of infection could be found. The disease was most prevalent in the unsewered part of the city, and surface privies and flies seemed to be the most plausible explanation of the epidemic.

Malaria.—The laboratory had a rather unusual experience this year in the examination of blood for malaria. Out of 194 specimens, 17 were found to contain the parasites. More than half of these cases gave a history of having acquired the infection in Indiana.

Gonorrhea.—Of the 349 specimens examined for gonococci, 144 (41.2 per cent.) were positive, of which 104 were from males and 40 from females. Two of the positive specimens came from two female children 3 years old and under.

Miscellaneous.—The 854 specimens classed as miscellaneous include urines, feces, pathological tissues, etc. Of the 105 specimens of feces, several proved particularly interesting. Tubercle bacilli were found in the feces of a cow, proved by slaughter to be affected with extensive glandu-

lar tuberculosis. Several specimens of pseudo-gall-stones resulting from the administration of large doses of olive oil were received. Two samples were feces containing the pseudo-parasite, the result of eating bananas.

Of 187 specimens of pathological tissues, 37 were carcinoma and 11 were sarcoma. Material from autopsies on two patients dead of trichinosis were received in February. One case occurred in North Salem, the other in Fairmount. Reports of eight other cases of trichinosis accompanied the reports of the autopsies.

A total of 9,226 outfits were sent out to physicians during the year.

RABIES.

For the past three years an epidemic of rabies of no small proportions has existed in the state of Indiana. Beginning with a few sporadic cases in 1906, the disease has spread to almost every section of the state. The epidemic seems to have reached its height in the summer of 1908, and now appears to be abating somewhat, although the danger period is far from being past. It is doubtful if the laboratory records show half the damage done by rabid dogs.

Since December, 1906, the brains of 221 animals have been examined, of which 137, or 62 per cent., were found to contain Negri bodies, and 84, or 38 per cent., not to contain them. The positive cases are distributed as follows: Dogs 116, cats 8, hogs 8, cattle 4, sheep 1. From May 1 to Aug. 31, 1909, 67 brains were examined. Twenty-one, or 31½ per cent., were positive, and 66¾ per cent. negative. The small per cent. of positive findings during this period—only a little more than one-half the average per cent. for the entire three years—is due to several causes. In May of this year a woman died in Indianapolis with what was said to be hydrophobia.

The earliest cases occurred in 1906 in counties on or near the east and west borders of the state, as Vigo, Parke, Daviess, Allen and Wayne, a fact strongly suggestive of the disease having been brought into Indiana from adjoining states. The Ohio Board of Health report for 1906 shows that evidence of rabies was found in 26 dogs' brains by the Ohio State Laboratory in that year.

No positive case occurred in Marion county until the winter of 1907 and 1908. Cases increased and by the summer of 1908 became alarming—30 positives having been examined between July and September. In the whole state there were two positive cases in 1906; 11 in 1907; 70 in 1908, and 54 to Aug. 31, 1909. There has been a steady decline in the number of positive cases received at the laboratory since Jan. 1, 1909. In

the first three months of this year 27 positive brains were received; in the second quarter 21; in the third quarter only 6; and this in the hot season—the so-called dog days when many of the laity believe that dogs may develop rabies spontaneously. Between March 11 and Aug. 2, 1909, four positive dogs' brains were received from Mishawaka, and the *South Bend Times* reported five cases in Mishawaka among animals diagnosed rabies clinically that were not sent to the laboratory. Several of these had been bitten by dogs which had been proved to have rabies by microscopic examination. Hence, this seeming lessening of the number of cases is no reason for relaxing the enforcement of muzzling and other anti-rabic ordinances.

For purposes of convenience the State Board of Health has divided Indiana into three sanitary sections—the northern, central and southern sections, including the respective thirds of the state. In the northern sanitary section there have been 19 positive brains examined; in the central, 94; and in the southern, 24. Brains of animals proved to be rabid by microscopic examination have been received from 9 out of the 31 counties in the northern section; from 18 of the 33 counties in the central section; and from 13 of the 28 counties of the southern section. It is thus seen that the central and southern portions of the state have suffered most from the epidemics. This does not show the true state of affairs in the northern part of the state, however, because many dogs' heads from there have been sent to Chicago.

The mortuary statistics of the State Board of Health show that in the four years from 1906 to 1909, inclusive, there were thirteen deaths in Indiana said to have been due to hydrophobia. The diagnosis in none of these cases was verified by microscopic examination of the brain after death.

The records of the laboratory in regard to the loss of live stock is too meager to be of much value. Several individual cases of heavy loss have come to our notice. Mr. Kaler, of New Augusta, Marion County, lost 21 chickens, 10 hogs and 1 cow. Mr. Dillon, of Calvertsville, Greene County, lost "over 30 pigs and a number of fattening hogs." A gentleman near Mishawaka, St. Joseph County, lost 8 sheep. Mr. Deffenbaugh, township trustee at Mishawaka, stated in a recent interview in the *South Bend Times* that if the demand for reimbursement for stock killed by rabid dogs kept up the fund for that purpose—the so-called dog tax—would soon be completely exhausted.

When all the items of expense and loss are considered, the epidemic of rabies has probably cost the state not less than \$100,000. The remedy, which is being applied in some localities, is simple and effective. By simply enforcing a muzzling ordinance throughout Great Britain the number of cases of rabies was reduced from 672 in 1895 to none in 1900. Since 1900 the disease has been unknown in Great Britain. So thoroughly did muzzling stop rabies, that professors had to import a dog's brain from America last year to demonstrate Negri bodies to medical students. It is to be hoped that the people of Indiana may follow the example of the English.

FOOD, DRUG AND WATER WORK.

The food, drug and water work of the board requires a superintendent, an assistant superintendent, two food chemists, one drug chemist, two water chemists, four traveling inspectors and three stenographers and clerks.

During the year ending November 1, 2,111 samples of food and drugs collected by inspectors or sent in by health officers has been analyzed. Of this number, 1,392 samples have been pure, and 719 samples have not conformed to the legal standard of strength; they have contained injurious ingredients or have borne misleading labels. This is equivalent to an adulteration of 34 per cent. The percentage of adulterations for 1906 was 42.9 per cent.; for 1907 it was 20.8 per cent., and for 1908 it was 25.7 per cent. Upon this basis of comparison continued improvement of the character of the food supply is noticed. It should be understood, however, that since inspectors in collecting samples take up only such articles as are likely to be misbranded or adulterated, the percentage of illegal articles must not be assumed to be as great as the figures above given would indicate.

During the year the inspectors have visited 253 cities and towns and made sanitary inspections of 7,878 business places engaged in the production and distribution of foods and drugs. In addition to this number of first inspections, 272 second inspections and 245 third inspections were made during the year, raising the total number of inspections to 8,395. On the first inspection 258 places were reported as being in excellent condition; 4,007 establishments only in good condition; 2,791 were reported as fair, 682 as poor and 140 bad. Fully twice as many groceries were visited as any other class of houses. Of 2,566 inspections of grocery stores, only 125 were so clean, so well ventilated, screened, lighted and properly conducted as to warrant their classification as excellent. One thousand three hundred

and seventy-six groceries were found to be in good condition; 906 were in fair shape; 137 poor and 22 bad. The meat markets inspected numbered 1,355, and of these 30 were classed as excellent; 783 good; 461 fair; 74 poor and 7 bad. The number of hotels and restaurants inspected was 1,145, and only 16 were reported to be in excellent condition; 376 were in good condition; 540 were fair; 185 were poor and 26 were bad. The inspections showed the sanitary condition of hotels and restaurants to be decidedly more unsatisfactory than that of any other class of places inspected. Hotel and restaurant kitchens are inadequate and unclean, provisions are of inferior character, ice-boxes are dirty and foul smelling and the employees frequently unclean and diseased. Of the 1,022 bakeries and confectioneries visited, 38 were in excellent condition; 508 were rated as good; 310 fair; 91 poor, and 15 bad. Nine hundred and eighty-five drug stores were inspected; 380 were in excellent condition; 377 good; 185 fair; 34 poor, and 9 bad. Of the 122 slaughter houses visited, only 1 was in excellent sanitary condition; 31 were in good shape; 41 fair; 33 poor, and 16, or 13 per cent., of the entire number were woefully and awfully insanitary. Fifty-four poultry houses were inspected, and not a single one was found to be in excellent condition. This business is usually conducted in a dilapidated structure, proper facilities for sewage disposal and water supply are rarely found, rooms are poorly lighted and unventilated except by broken window panes and cracks in the walls, and during fly season they swarm with these insects. Two hundred and ninety-one dairies were visited, only 3 of which were reported as being in excellent condition; 39 of them were in good condition; 115 in fair shape; 88 poor, and 26 bad. Other inspections than the above included visits to fish markets, creameries, ice-cream factories, milk depots, canning factories, bottling works, cold-storage plants, commission houses, pharmaceutical companies, breweries, pickle and vinegar factories and flour mills.

During the year 922 samples of water were analyzed. Of this number, 269 were deep-well water, 478 shallow wells, 19 were from ponds and lakes, 51 from springs and 38 from streams. In addition to this, 28 miscellaneous samples were analyzed. This number included samples of sewage from state institutions, polluted river water sent in from the fish commission, samples from Lake Michigan and other water places which were being investigated. Of the deep-well waters, 28 were so polluted as to be classed as bad, and 7 were of doubtful quality. Of the 478

shallow wells, 234 were of good quality; 212 bad and 32 of doubtful quality. The State Board of Health condemns shallow dug wells because they sooner or later are sure to become polluted. Fifteen stream waters were found to be good and 23 bad. Nineteen pond or lake supplies were examined and 12 were of good quality and 7 bad. Of the 51 spring waters, 42 were of good quality, 6 were bad and 3 doubtful. It was discovered that many samples sent in as spring supplies were in fact only surface water, since they possessed none of the characteristics of a true spring water. The analyses showed that 30 per cent. of the cistern waters were not potable. Cistern waters are likely to be bad because cisterns are usually located in the back yard near vaults, leaking walls which admit polluted water from the outside and badly constructed, admitting ground water.

During the year 257 samples of drugs were analyzed, of which 165 were of full strength and 92, or 35.8 per cent., below the legal standard. Of 13 samples of tincture of arnica, 10 were up to the required standard and 3 were below. Of 76 samples of spirits of camphor, 42 contained the required amount of camphor gum and 44, or 80.9 per cent., were below standard. Tincture of iron is of much better quality than formerly, and this may generally be said of nearly all the pharmaceuticals now sold by druggists. One hundred and thirty-five cases were successfully prosecuted during the year.

J. N. HURTY, M.D.,
State Health Commissioner.

PRESIDENT HORATIO C. WOOD has appointed the following committee on credentials and to make arrangements for the United States Pharmacopeial Convention which will be held in Washington, D. C., beginning Tuesday, May 10, 1910: Prof. O. T. Osborne (chairman), Yale University, New Haven, Conn.; Dr. H. C. Wood, Jr., University of Pennsylvania, Medical Department, Philadelphia, Pa.; Mr. L. S. Hilton, Washington, D. C.; Mr. W. L. Cliffe, Philadelphia, Pa.; and Dr. James H. Beal, Scio, Ohio.

The following officers of the convention are *ex officio* members of the committee: President, H. C. Wood, Sr., University of Pennsylvania, Medical Department, Philadelphia, Pa.; secretary, Dr. H. M. Whelpley, Washington University, Medical Department, St. Louis, and Assistant Secretary, Dr. Murray Galt Motter, Hygienic Laboratory, Washington, D. C.

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EDITORIALS

CRITICISM OF THE TRAINED NURSE.

A few years ago we heard nothing but praise from the medical man for the trained nurse. Now we frequently hear words of condemnation. The trained nurse is criticised because she too often attempts to place her own limited medical knowledge ahead of the knowledge of the physician under whose direction she is supposed to act. Altogether too often the physician finds that his patient's confidence in his ability and judgment has been undermined by a meddlesome and opinionated nurse, and altogether too often the physician finds that his orders as to the care of his patient have been construed or carried out to suit the conceited ideas of the nurse. Some of the busiest and best physicians declare that they are satisfied with a trained nurse for the first two or three years after she has graduated, but after that she becomes objectionable through her acquired habit of assuming too much of the function of the attending physician and taking too many liberties in forcing her own opinions ahead of the opinions of the attending physician to whom she should be subordinate.

The fact of the matter is, the average physician places too much confidence in the ability of the nurse, and permits her to assume many of his prerogatives to which she is not entitled, either through education or experience. Oftentimes the nurse does know about as much or more about medicine than the doctor does, particularly if the doctor is one of the "ten-year brand," and she thus learns to feel and exercise her superiority. Once she assumes the position of an advisor, she is loath to give it up, and she continues to exert her influence in the new field even when associated with the better class of physicians to whose wishes she should be subservient, and the resulting friction leads to such criticisms as we now frequently see in our medical periodicals.

We presume that every training school for nurses has a course of lectures on ethics and personal conduct, and if so it is time to emphasize the subject of the relation which the nurse should

bear to the patient and to the attending physician. It would be unfortunate if any considerable number of medical men should become generally antagonistic to the trained nurse because of the ill-founded ambitions of the nurses. Any tendency toward over-officiousness on the part of nurses as a class should be checked in its incipency. A nurse should be taught not only to know her place, but keep her place under any and all conditions. Whenever she oversteps it there will be friction between her and the medical profession.

THE COMMITTEE ON SCIENTIFIC WORK.

The secretary of the Indiana State Medical Association discusses in this number of *THE JOURNAL* the action of the Committee on Scientific Work in preparing the program for the Terre Haute session, and by the tone of his letter he indicates that the work of the committee deserves some explanation.

We believe that the majority of those who attended the Terre Haute session are loud in their praise of the action of the committee in not only limiting the number, but in a manner determining the character and quality of the papers that were on the program. It is the height of absurdity to think that a large and representative medical society must yield to the selfish interest of all those members who request representation on scientific programs. The general excellence of the Terre Haute program, and the extended and uniformly good discussion brought out, testifies to the value of the program of a limited number of well-selected papers and sufficient time allowance for their proper discussion. Heretofore the programs for the sessions of the Association have been unnecessarily long, and, as stated by Secretary Heath, in one instance Marion County alone furnished 32 papers. The result has been that many of the papers were read by title because of lack of time to present them in any other way, and for the same reason but few of the papers received discussion.

Then, again, the privilege of referring papers to the Association on the understanding that they must be accepted when so referred has been shamefully abused. The rankest compilations, without the slightest evidence of originality, and some of the poorest and most unworthy of original papers, have often been referred because the local societies referring such papers have been afraid of creating ill feeling if upon request such papers have not been referred.

It seems to us that the appointment of a Committee on Scientific Work, with full power to select papers for the annual sessions, is the proper way of solving the difficulties attending the arrangement of a scientific program which is in keeping with the high aims and character of our Association. The Council has already exerted its constitutional privilege of deciding how the programs for the annual sessions shall be prepared, and at the Terre Haute session the House of Delegates unanimously passed a motion that the program committee shall accept for the sessions of the Indiana State Medical Association not more than five papers for each meeting of each Section, and that each paper considered by the program committee shall have been read before and received the endorsement of the County Medical Society of which the essayist is a member. This was in keeping with recommendations from the Council, and the Committee on Scientific Work has been entrusted with the duty of carrying out the plan.

A position on this program committee is certainly not an enviable one, if many members of the Association are going to be offended and criticize the members of the committee when certain papers are not accepted for the program. But it should be remembered that the success of the annual sessions from a scientific standpoint depends entirely upon the character of the programs and discussions, and failure will result if there is to be no judicious selection or limitation in the number of papers. No member should be offended because his paper fails to be accepted for some particular program of the Association, and the Committee on Scientific Work should receive the encouragement and support of the members individually rather than the carping criticism of those who are supersensitive concerning unintended slights.

In view of the excellent results brought about by the action of the Committee on Scientific Work in connection with the program for the Terre Haute session, and the utmost fairness with which the committee attempted to deal with all those who offered papers for the program, we think that criticism of the committee is entirely out of place, and we hope we shall hear no more of it. The committee received and deserved a special vote of thanks given by the House of Delegates, and the general expressions of approval heard on every hand indicate that a continuance of the plan followed in preparing the Terre Haute program will meet with general approbation.

THE VALUE OF THE OPHTHALMO-REACTION TO TUBERCULIN.

When it was shown by Wolff-Eisner that instillation of tuberculin on the healthy conjunctiva causes a reaction if there is a tuberculous focus in the body, it was thought by many that the ophthlmo-tuberculin test would revolutionize our methods of diagnosis of incipient tuberculous lesions. As usual, time and accumulated experience have caused us to modify our views somewhat, and to-day we are confronted with the established fact that the ophthlmo-tuberculin reaction is of doubtful utility if not actually dangerous. Its clinical value, as compared with other local reactions, cannot be considered as absolutely reliable, and its employment requires certain conditions. The reaction may be demonstrated in all forms of tuberculosis, unless the patient be moribund or nearly so, and a large proportion of persons who have recovered from tuberculosis, in a clinical sense, will react positively.

In the clinically incipient and suspected cases the test is often positive and assists in making a diagnosis. But, on the other hand, a goodly percentage of supposedly healthy subjects, and patients with non-tuberculous diseases, will react positively to the test. This may be due to idiosyncrasy, and only a large number of post-mortem observations will settle the question.

It has been asserted that a positive reaction speaks with very great probability for tuberculosis, and yet some observers report that a large percentage of patients affected with severe phthisis do not react. Therefore, a negative reaction does not indicate that the patient has not tuberculosis.

The degree of reaction varies. Some perfectly healthy eyes may give the very severest kind of reaction, and the reaction is usually severe in a diseased eye, so it is quite possible to draw wrong conclusions from the intensity of the reaction.

Numerous reports of damages to the eye following the instillation of tuberculin, not only to diseased eyes, but to perfectly healthy eyes, clearly demonstrate the dangers of the ophthlmo-reaction. A large number of authors have reported serious complications, in previously healthy eyes, as a result of the tuberculin instillations. The instillation into diseased eyes is strictly avoided by ophthalmologists, on account of the frequent serious consequences, and because nothing is gained by it for the diagnosis of the ocular disease. The instillation into the healthy eye does not give any clue as to a diseased eye because a reaction may be elicited by any tuberculous focus in the body.

In general, therefore, the ophthalmo-tuberculin reaction is of doubtful value in a large per cent. of cases, and its use is so frequently attended by serious results as to warrant a general condemnation of the test. If the subcutaneous test, the most reliable of all, is not desirable, then the cutaneous method of von Pirquet may be tried. This latter test is counted by most clinicians who have had extended experience with the various tuberculin tests, just as reliable as the ophthalmo-tuberculin reaction, equally as delicate, and attended with no danger. A negative reaction to von Pirquet's test, especially if repeated a second time, with pure tuberculin, is said by numerous observers to occur only in people perfectly free from tuberculosis. The positive reaction, even if only slight or belated, or at the second test, indicates a tuberculous focus in the body, which, however, need not be active or progressive. On account of its sensitiveness, the cutaneous test apparently indicates every, even the most harmless, focus of tuberculosis, and therefore is not sufficient for the diagnosis of active tuberculosis. It is not, however, attended with any danger, and being equally as reliable is to be preferred to the ophthalmo-tuberculin reaction if the subcutaneous test is not to be employed.

THE FLEXNER SERUM.

Within the past year there have been fourteen deaths from epidemic cerebrospinal meningitis in Indiana. Not one of these cases was treated with the Flexner serum, notwithstanding the fact that the serum could have been obtained without cost from the State Board of Health, or from the pathological department of the Indiana University, as announced in *THE JOURNAL* over a year ago. Therefore, it is quite evident that the physicians of Indiana are not taking advantage of the opportunity that has been offered to combat such a serious and dangerous disease.

It should be remembered that Dr. Flexner is in the employ of the Rockefeller Institute, and he has not introduced the serum as a commercial feature, but as a scientific discovery for the saving of human life. It is with a view of thoroughly testing the efficacy of the serum and placing it upon a sound scientific basis that led to the offer on the part of Dr. Flexner to place the serum in the hands of reputable physicians for thorough trial in the treatment of epidemic cerebrospinal meningitis, and without cost. The only exaction required of the user of the serum is that accurate and full histories of the cases be kept, that the cases be diagnosed bacteriologically, and that these histories be sent to him.

Thoroughly trustworthy reports from competent observers who have used the Flexner serum indicate that we have in it as near a specific for the treatment of epidemic cerebrospinal meningitis as antitoxin is in the treatment of diphtheria.

There is no question but that many cases of epidemic cerebrospinal meningitis have not been recognized, as it is also probable that some error has been made in some cases diagnosed as epidemic cerebrospinal meningitis. It should be remembered that the disease is one of the specific infections caused by the diplococcus intracellularis meningitidis of Weichselbaum, but that its clinical manifestations may simulate the manifestations of other spinal cord conditions and even some brain disease. Epidemic anterior poliomyelitis is frequently mistaken for epidemic cerebrospinal meningitis, and sometimes the differentiation is impossible except by means of bacteriological examination of the cerebrospinal fluid. Therefore, it is of the utmost importance that an accurate diagnosis be made, and this can be secured only through the means of spinal puncture and microscopic examination of the cerebrospinal fluid.

Spinal puncture when done under aseptic precautions is a harmless procedure, and it should be resorted to in every suspicious case. If the fluid is turbid, there is strong presumptive evidence that the trouble is cerebrospinal meningitis, and the microscope will complete the diagnosis. Having made the diagnosis, the Flexner serum should be administered promptly. The earlier the diagnosis and the earlier the administration of the serum the better the chances for the recovery of the patient.

Sufficient statistics are already available to show that the mortality has been reduced to less than 20 per cent. when the serum is administered early, and even in the cases where the serum treatment has been delayed the mortality has been reduced from 50 to 60 per cent. But it should be remembered that a bacteriological diagnosis is essential, for while the use of the Flexner serum in cases that are not epidemic cerebrospinal meningitis may produce no harm, there is no excuse for its administration until the disease has been accurately determined by the means now at our disposal.

Here in Indiana the State Board of Health, or even the pathological department of the Indiana University, will, in response to telegraphic request, send some of the serum to any reputable physician having a case of suspected epidemic cerebrospinal meningitis, or if the distance is not too great they will even send some one equipped

and competent to make the diagnosis and administer the serum, and without charge.

If the physicians of Indiana have at their command the serum, the laboratory facilities and the services of skilled men to aid in making a diagnosis and assist in the administration of the serum, and all without charge, there is no excuse for not giving patients suffering from suspected epidemic cerebrospinal meningitis the benefit of the serum treatment which has already demonstrated itself as practically a specific in this disease which is attended with such a high mortality.

ECHINACEA.

For the benefit of those who may not have followed the work of the Council on Pharmacy and Chemistry of the A. M. A., yet who, like ourselves, have been desirous of acquiring some accurate data concerning a drug rather recently thrust upon the market, echinacea, we take the liberty of reproducing the essential part of their report.*

This drug, first introduced by the eclectics with exaggerations of its therapeutic value, unusual even for a nostrum, was the main ingredient of such proprietary remedies as echafolta, echtol, eusoma, etc. The following literary gem is a copy of the label on Meyer's Blood Purifier, a rank nostrum, containing echinacea, and serving as a vehicle for its introduction into eclectic medicine by Dr. H. F. Meyer:

"Take one ounce three times every day in the following cases: Rheumatism, Sick Headache, Erysipelas, Dyspepsia, Old Sores and Biles, Open Wounds, Dizziness, Scrofula and Sore Eyes."

"In case of Poisoning by Herbs, etc., take double the doses, and Bites of Rattlesnakes, take three ounces three times a day, until the swelling is gone. This is an absolute cure in 24 hours."

Later the preparation appeared with a new label: "*Echinacea Augustefolia*."

"This is a powerful drug as an alterative and antiseptic in all tumorous and syphilitic indications; old chronic wounds, such as fever sores, old ulcers, Carbuncles, Piles, eczema, wet or dry, can be cured, quick and active; also Erysipelas. It will not fail in Gangrene. In fever it is a specific; typhoid can be adverted in two to three days; also in Malaria, Malignant, Remittent and Mountain fever it

is a specific. It relieves pain, swelling and inflammation, by local use, internal and external. It has not and will not fail to cure diphtheria quick. It cures bites from the bee to the rattlesnake, it is a specific. Has been tested in more than fifty cases of mad dog bites in human, and in every case it prevented hydrophobia. It has cured hydrophobia. It is perfectly harmless, internal and external." "Dose.—One-half to one fluid drachm 3 or 4 times a day."

"Manufactured by H. C. F. Meyer, M.D.

Pawnee City, Neb., U. S. A.

Price \$
Patent.

To these disgusting claims for the drug equally preposterous ones have been added by later enthusiasts who recommend it as a cure for tuberculosis, tetanus and exophthalmic goiter, with an inhibitory power over cancer.

None of the drug's eulogistic supporters are men of recognized clinical abilities, nor have any data been forthcoming to show the true physiologic action as based on animal experimentation. If the drug has actual bactericidal properties it would be a comparatively easy matter to prove such by well-controlled tests on cultures of the ordinary organisms with which we daily come in contact, and particularly the streptococcus and staphylococcus, inasmuch as the glib detail man informs us that the drug has a peculiarly selective action in the destruction of the pus-producing organisms. But so far as we are able to ascertain, no such accurate data concerning the actual antiseptic and bactericidal powers of the drug are at hand, and we are asked to swallow whole the tale of this wonderful panacea for all human ills from "biles" to rattle-snake bites and from headaches to consumption and Graves' disease.

Granting that improvement or cure did follow in, say, some obstinate case, during the exhibition of the drug; that in itself proves nothing unless it be based on a large series of similar observations from which all sources of error had been eliminated. Who knows but that a period in the treatment of that case had been reached when the *vis medicatrix naturæ* was at last able to win the battle and assume the ascendancy; or what has been accomplished that might not have occurred following the administration of one of the well-recognized and less-touted alteratives?

For the present, then, let us await the actual demonstration of the physiologic action of this, as all other remedies, meantime hoping that if scientifically supported the burden of so quackish a label will be eliminated.

* For full report see Jour. A. M. A., Nov. 27, 1909, p. 1836.

EDITORIAL NOTES

HAVE you paid your state medical association dues? If not do it now. Dues are delinquent on and after February 1.

IT is hoped that the committee representing the Indiana State Medical Association appointed to confer with the Indiana State Board of Medical Registration and Examination concerning an increase in the requirements for medical practice in this state, has been active in its efforts to convince the Board that Indiana should not be behind other states in the adoption of higher standards.

THE new membership cards for 1910 are an improvement over the cards issued last year. They are not only of better quality, but are smaller and therefore much more convenient to carry. We urge every member of the Association to carefully preserve his membership card, and in case of loss to at once secure a duplicate from the Secretary, as an effort will be made to have registrations at the Fort Wayne session by card only.

A NEW local anesthetic under the name of "nontoxo" is being exploited by a South Bend firm. All reference to the nature of the new remedy is studiously avoided, and physicians are asked to take the manufacturer's word for the properties of the preparation. It reminds us of the exploitation of antikamnia and other proprietary remedies of secret formula. Until the manufacturers tell us something about the composition of "nontoxo" the rational medical man will be wise in refusing to give it serious consideration.

WITH this number THE JOURNAL begins its third year of existence. The record of THE JOURNAL for the past is now a matter of history. The record of the future will depend upon those who are immediately responsible for THE JOURNAL's welfare. The enthusiasm, enterprise and activity of the editors have not diminished and their ability ought to be increased through experience. The aim will be to make a larger and better journal during 1910, and in this effort the editors ask the cordial cooperation of every member of the Indiana State Medical Association.

WE desire to call attention to the fact that the county and district society directories in *The*

Journal are incomplete because we have not been able to obtain information from secretaries as to changes which should be made. Now that new officers have been elected for the year 1910, we hope that one of the first duties performed will be the notification of this office of announcements pertaining to county and district societies. It is our wish to have these directories accurate and thoroughly up to date. They can only be made so through the assistance of secretaries of county and district societies.

SOME of the members of the Association who presented papers at the Terre Haute session have failed to send in their manuscripts, notwithstanding the fact that we have made repeated requests for the same. Other members are very negligent in promptly correcting proof and sending the same to this office. It must be evident to every reader of THE JOURNAL that a great deal of time is spent upon each month's issue of THE JOURNAL, and that anything which interferes with the systematic manner in which we attempt to conduct the affairs of THE JOURNAL interferes with the best results. We therefore hope that we may have the cordial assistance of those upon whom we have to depend for aid in promptly supplying the printers with copy and corrected proof.

THE attention of county, district and other local medical societies is called again to the following resolution passed by the last House of Delegates of the A. M. A. at the session held in Atlantic City, June 10, 1909:

WHEREAS, The American Medical Association, not only as one of its declared purposes, but by numerous lines of activity, many of them connected with the Section on Hygiene and Sanitary Science, stands committed to the education of the public with respect to the nature and prevention of disease; and,

WHEREAS, The demand for such popular education with respect to tuberculosis, cancer, typhoid fever and other decimating diseases has become urgent; therefore be it

Resolved, That all county, district and other local medical societies be, and they are hereby, requested to hold annually one or more open meetings to which the public shall be invited to attend and participate and which shall be devoted to a discussion of the nature and prevention of disease and to the general hygienic welfare of the people.

THE manufacturers of some of the rankest fakes in the line of pharmaceutical specialties of secret formulæ are now trying to interest the medical profession in guaranteed 7 per cent. pre-

ferred capital stock in the nostrum business. The doctor is urged to lay aside a little money which will draw a good income, payable quarterly, and the 7 per cent. preferred stock of the pharmaceutical firm, recommended by bank or trust company to be safe, is offered as an ideal investment. As a sort of trading stamp or premium coupon accompanying the stock is an offer to grant a certain discount to the stockholders upon purchases of goods of the firm's manufacture.

The proposition is fair, and unquestionably the doctor who accepts it will profit in dollars and cents, but at the expense of a severe tax upon his conscience. It should be patent to every physician that the proposition is a bid for the support of medical men in a business that is tinctured with fraud. These firms can obtain all the money they want in the usual business way of borrowing it from banks or trust companies at 5 per cent. interest, but they prefer to pay a premium for the influence of medical men in the work of fleecing the public.

THE Committee on Medical Legislation has decided to hold the annual Conference on Medical Legislation at Chicago March 1 and 2, 1910. This conference will be on the days immediately following the Conference on Medical Education, called by the committee of the American Medical Association on that subject. This arrangement is most fortunate, as it affords an opportunity for those interested in both subjects to attend the two conferences and also makes it possible to hold a joint conference on March 1 which will be devoted to the consideration of a model medical practice act. This subject, involving, as it does, a discussion of medical laws and medical education, can only be properly handled in such a joint conference. A program is now being arranged for this joint meeting which will be announced. An entire day will be devoted to a discussion of the essential features of a model medical practice act, which will later on be formulated and submitted to the Association for endorsement. The second day of the conference will be devoted to the purely legislative features of the committee's work, embracing legislation on vital statistics, pure food and drugs, public health, expert testimony, etc. The time and place of the meeting have been selected in the hope that a large attendance of those interested in these important subjects can be secured.—*Bulletin of the A. M. A.*

ate course, Indiana makes the best showing of any state in the Union.

It is unfortunate that some of the Indiana societies that began the postgraduate course and then abandoned it did not begin at the middle or end of the course instead of at the first, which is the dryest and most uninteresting part of the course. For instance, the Fort Wayne Medical Society, with over one hundred members, and recognized as an active and progressive society, began the postgraduate course and stuck to it for several months. The leaders in discussion spent an enormous amount of time in preparing their work, and the subjects were presented in a very interesting and comprehensive way, but the attendance at the weekly meetings fell off until there was every indication that the society would soon exist in name only unless some change was made. The postgraduate course was then abandoned and the society returned to the regular reading of papers, discussions, presentation of case reports and exhibition of patients, specimens, etc. Within a few meetings the attendance had returned to the normal and there was again exhibited the enthusiasm and interest which had formerly existed, and it has not only continued but grown since then. The experience of the Fort Wayne Medical Society has been duplicated by some other large societies, and in each instance the failure to make the postgraduate course a success has been due to the comparative dryness of the program as compared to the interesting and varied programs presented in the average society having a number of active and progressive men of large clinical experience.

It is not our purpose to condemn the postgraduate course of study, for it is being pursued by many societies with apparent profit and increasing interest, but we do believe that the plan has not been more generally adopted or successful with many societies, and particularly the large societies, because it does not offer, particularly in the beginning, sufficient variety in the way of clinical teaching. We grant that the postgraduate course, even the part devoted to anatomy and histology, can be made interesting, but the average medical man will not become enthused over it, and it is the average men who make up the majorities in our medical societies. We doubt if a better plan could be perfected for carrying on real postgraduate work, and it is a pity that the rank and file in every medical society cannot be made to appreciate the value of such a course, but the fact remains that it is much harder to keep the average society in a prosperous condition on a postgraduate diet than it is on the varied diet which the ordinary program affords.

TWENTY-TWO county medical societies in Indiana are now following the postgraduate course proposed and recommended by the A. M. A. Except Pennsylvania, which has forty-seven county medical societies pursuing the postgradu-

CORRESPONDENCE

A LIE IN A RELIGIOUS PERIODICAL.

MUNCIE, IND., Dec. 9, 1909.

To the Editor:—I wish that every physician who is a subscriber to the *Western Christian Advocate* (Cincinnati) would write a personal letter to the editor of that paper and enter a protest against the advertisement found on page 27 in the number issued Dec. 8, 1909. The heading is "\$2,000 to Your Income." It is a lie, and a religious periodical that publishes it ought to apologize.

G. W. H. KEMPER.

OFFICIAL NOTICE CONCERNING DUES.

To Secretaries of County Societies:

Attention is called to the fact that the Indiana State Medical Association reports and dues should be sent in January 1. and become delinquent after February 1. It is hoped that the names will be arranged either alphabetically or preferably by towns or postoffice addresses, such grouping being an aid in making out lists. *But promptness should be the first consideration.*

Respectfully,

F. C. HEATH,

Secretary Indiana State Medical Association.

THE COMMITTEE ON SCIENTIFIC WORK.

INDIANAPOLIS, IND., Dec. 9, 1909.

To the Editor:—I wish to correct a mistaken impression that I have recently found to prevail, in some quarters, relative to the action of the last Committee on Scientific Work in making up the program for the Terre Haute session of the Association. Some members have complained that they were prevented from reading papers by action of this committee. This is an error. The committee accepted all of the papers sent in just as in previous years; (but twenty-one papers were received). It is true that, acting under instructions from the Council, they inserted a notice in *THE JOURNAL* that not more than twenty voluntary papers would be accepted and that certain other conditions must be fulfilled, and a part of the program was filled by a few invited to participate in symposia, but this was with a view of increasing interest and adding to the scientific merit of the program.

The plan of this year was a new departure and partly experimental, and, while not following old

precedents, it was in conformity with the provisions of the present by-laws. It was proposed by the Council and followed by the committee, because there was so much dissatisfaction over the old method which always resulted in the acceptance of so many papers that there was hardly any time for discussion, the culmination coming after the 1908 session at French Lick when Marion County alone furnished thirty-two papers. Indeed, Marion County has probably averaged over twenty papers a year for many years, and yet in that county the greatest dissatisfaction was manifested this year because two or three men did not get their papers on the program even though these same men were appointed discussants. As their papers were not referred to the Association, they cannot blame the members of the Committee on Scientific Work who simply requested the Marion County Society not to send in more than eight papers for the Terre Haute Session for the reason that the Council had instructed the committee to limit the voluntary papers to twenty.

There seems to be a wide difference of opinion as to the relative merits of the old method and the one pursued the past year. Personally, it seemed to me that the new plan was preferable, as it gave more time for discussion, which is really the life of the meetings, and one of the symposia aroused more enthusiasm than anything I have seen before. In fact, I heard at Terre Haute more expressions of approval than usual.

The House of Delegates has now established a rule for the guidance of the Committee on Scientific Work by permitting the acceptance of not more than five papers for any one meeting of any single section, and requiring that any papers accepted for the program must have been read before the County Medical Society of the county in which the essayist resides.

The greatest danger is that a few counties will send up too many papers, as in the past, while many counties never send any, and quite a number of counties only send a paper at very long intervals. It would seem proper to place some limit on the number of papers which are referred by the large societies, and a special effort should be put forth to secure a few *good* papers from the smaller societies. All should agree that the country doctor should contribute frequently from his stores of valuable experience, and the Association should be first of all a society for the general practitioner. Indeed, we are all doctors before we are specialists.

Any plan that suits the majority of the Association suits me, although I have personally been embarrassed when crowded programs have elim-

inated discussion or prevented some men from reading their papers. So far as any action of mine is concerned I intend to try to satisfy all and give them a square deal, as I have always done, although it looks like a very difficult problem to suit people desiring diametrically opposite plans.

F. C. HEATH,

Sec'y Indiana State Medical Association.

DEATHS

THE body of Dr. Victor H. Sturm, who died in Michigan City, Iowa, early in the week, arrived in Anderson January 1.

MRS. MITCHELL, the widow of the late Dr. Harvey Mitchell, of Muncie, died November 27, just five days after her husband's death.

MRS. ELIZABETH ECKELMAN, wife of Dr. F. C. Eckelman, and mother of Dr. M. M. Eckelman, of Elkhart, Ind., died November 12 of Bright's disease.

DR. T. A. WHITE, a practicing physician of Noblesville, died suddenly, December 3, from asthma, aged 61 years. He was in apparently good health the evening previous and made two professional calls as late as midnight.

DR. TIMOTHY F. MATHENY, Medical College of Fort Wayne, Ind., 1878; a member of the Indiana State Medical Association; died at his home in Auburn, Ind., December 9, from asthma, aged 79.

DR. ROBERT GRIFFIS died recently at his home in Middletown, following a stroke of paralysis, aged 82. Dr. Griffis was one of the pioneer physicians in Henry County. It was stated in error last month that Dr. Griffis died in Muncie.

WILLIAM H. MCGUIRE, M.D., a graduate of the Eclectic Medical Institute, Cincinnati, 1874; a member of the Indiana State Medical Association; died at his home in Frankfort, November 27, from cerebral hemorrhage, aged 62.

DR. WILLIAM E. JEFFRIES, one of the best known physicians in Indianapolis, was struck and almost instantly killed by a Fort Benjamin Harrison traction car near the German House, on Massachusetts Avenue early on the morning of December 4.

DR. REGINALD GARSTANG, one of the best known younger physicians of Indianapolis, died December 21, at Dr. A. E. Sterne's sanitarium, at the age of 35 years. Dr. Garstang was born in Galion, Ohio, Aug. 4, 1874, and received his early education in Richmond, Va. He was a surgeon in the Spanish-American War.

DR. W. N. HEATH, of Indianapolis, died December 31, at the home of his daughter in Kokomo, at the age of 65 years. He formerly lived in Tipton, Howard and Madison counties. In 1891 he was elected auditor of Madison County, moving to Indianapolis after the expiration of his term of office.

DR. JOHN C. ROSS, one of the best known physicians of Muncie, was ground to pieces under the wheels of a freight train. Dr. Ross was on the way to make a professional call, and while there were no eye witnesses to the accident, it is believed that he met his death when attempting to climb between or over the cars that were blocking the way. Dr. Ross was 65 years of age.

DR. J. N. PARR died at his home in Jolietville, Ind., December 24. Dr. Parr was born in Boone County, Ind., Oct. 6, 1837. He attended the DePauw University, and graduated from the Ohio Medical College in 1866; practicing medicine in Boone County until a few years ago, when failing health made it necessary for him to give up his work. He was 72 years of age.

DR. FRANK M. WARFORD died at his home in Noblesville, December 19. He was born in Putnam County, and served as a surgeon in Indiana and Iowa regiments during the Civil War. Dr. Warford served three terms as president of the Hamilton County Medical Society, and for a number of years was a member of the Indiana State Medical Association. Dr. Warford was 78 years of age.

DR. WILLIAM H. SHEETS, a graduate of the Cincinnati College of Medicine and Surgery, 1862, and a member of the Indiana State Medical Association; assistant surgeon U. S. Army throughout the Civil War; secretary of the Clark County (Ind.) Board of Health; a member of the Jeffersonville Board of Health for twenty years; at one time physician to the Indiana State Prison, South Jeffersonville; for several years a member of the local pension board, and a licensed minister of the Methodist Episcopal Church; died at his home, December 1, from tuberculosis, aged 76.

DR. THOMAS P. SELLER died December 19, at his home, 2926 North Illinois Street, Indianapolis, after being an invalid for thirteen years, at the age of 84 years. He was a graduate of Rush Medical College, Chicago. Early in his career he practiced medicine in Hendricks County, but in the eighties he sold his practice to Dr. Joseph Eastman and went to Kansas, but later returned to Indiana and located in Indianapolis, and was associated with many of the older physicians, among them Drs. Marsce, Eastman, Harvey, Cominger and Oliver, all of whom are now dead. Dr. Seller was a member of the Presbyterian Church.

NEWS, NOTES AND COMMENTS

DR. J. C. JOLLY, of Lake, Ind., is on the sick list.

DR. JESSE B. HIGGINS has moved from Peru to Lagro, Ind.

DR. CHARLES S. BRYAN, Vincennes, has been reappointed county physician.

DR. G. W. H. KEMPER, of Muncie, celebrated his seventieth birthday on Dec. 16, 1909.

DR. J. E. LUZADDER, formerly of Smithville, has recently moved to Bloomington, Ind.

DR. P. B. CARTER, of Peru, has recently removed to Macy, Ind., where he will practice.

DR. CLARKE E. STEWARD and Miss Antoinette Andrews were married December 16 at Vincennes.

DR. JAMES D. McDOWELL, lately elected mayor of Vincennes, has assumed the duties of his office.

DRS. J. C. GIFFORD and S. G. HOLLINGSWORTH, of Brazil, are spending the midwinter at Manatee, Fla.

DR. ALBERT HENRY, of Indianapolis, attended the Mayo's clinic at Rochester, Minn., in November.

DR. WALKER SCHELL, of Terre Haute, has recently recovered from an attack of lobar pneumonia.

DRS. P. H. CANEY, J. W. Smadel and M. W. Scott have been appointed to the Board of Health of Vincennes.

DR. C. A. RENNOE and Miss Veronica Starr, both of South Bend, Ind., were united in marriage, October 28.

DR. M. S. LAWRENCE, of Orland, expects to move into Ohio in the near future, and will take up practice there.

DR. E. D. MOFFETT, of Indianapolis, has recently moved to San Francisco, Cal., where he has opened an office.

DR. DOUGLAS C. RAMSEY, of Mount Vernon, Ind., and Miss Rose Shellen, of Evansville, were united in marriage, December 1.

DR. T. VICTOR KEENE, of Indianapolis, will sail in February for Berlin, where he will spend the next two years in special work on diseases of the chest.

DR. W. H. JOHNSON has recently been elected president of the Indianapolis City Council. Dr. Johnson has lived for many years in Brightwood, one of the suburbs.

DECEMBER 9 was donation day at the Methodist Episcopal Hospital, Indianapolis, and several thousand dollars was received. Hereafter it will be an annual event.

DR. EUGENE BISHOP MUMFORD, of Indianapolis, has become associated with Dr. T. Victor Keene in the management of the Indiana Pasteur Institute, Indianapolis.

DR. JOHN M. CUNNINGHAM has recently been appointed police surgeon of Indianapolis, and Dr. Moses Thorne, assistant police surgeon, by the new mayor, Lewis Shank.

DR. ALTA CROCKETT has opened an office in the Pennway Building, Indianapolis, for the practice of diseases of the eye and ear. She formerly practiced medicine in Bloomington.

DR. J. B. THOMAS, one of the interns of the Indianapolis City Dispensary, has recently resigned, and accepted a partnership with Dr. C. S. Smith, 1021 North Senate Avenue, Indianapolis.

DR. C. L. THOMAS, of Logansport, was injured in Chicago, December 6, when an automobile in which he was riding turned turtle. Dr. Thomas suffered a broken jaw, a dislocated shoulder and internal injuries.

DR. E. D. SWIFT, of Macy, Ind., is recovering from a very severe illness. He will retire from the practice of medicine for a while, and Dr. P. B. Carter, of Peru, will take charge of his practice.

WORK on the new St. Vincent's Hospital, which is to be located on North Illinois Street, just above Fall Creek, Indianapolis, will be commenced early in the spring. Bids will be asked for in January.

THE Fort Wayne Academy of Medicine, at its annual meeting, elected Dr. Harold K. Mouser, president; Dr. Cecil C. Kimmel, vice-president; Dr. Willis W. Carey, secretary, and Dr. Charles G. Beall, treasurer.

DR. E. G. KYTE has resigned as interne at the Methodist Episcopal Hospital in Indianapolis and has opened an office in the Pennway Building. He was succeeded at the hospital by Dr. M. L. Light, of Broad Ripple.

DR. T. C. KENNEDY, president of the Indiana State Medical Association, has moved his office and residence from Shelbyville to Indianapolis. His residence will be 12 East Michigan Street, and his office address 304 The Pennway.

DR. HARRY C. KAHLO, of Indianapolis, brother of Dr. George D. Kahlo, ex-president of the Indiana State Medical Association, has given up the practice of dentistry and become a member of the firm of Havens & Geddes, wholesale dry goods merchants of Indianapolis.

AT the annual meeting of the Thirteenth District Medical Society, held in Warsaw, Dr. Charles J. Loring, Rochester, was elected president; Dr. Lorenzo D. Eley, Plymouth, vice-president, and Dr. C. Norman Howard, Warsaw, secretary-treasurer. The next meeting will be held in Goshen.

THE Kosciusko County Medical Society held no November meeting, the Thirteenth District Medical Society having met at its county seat (Warsaw), November 19. A large majority of all the members of the county society were present and thoroughly enjoyed the afternoon and evening sessions and the good dinner between the two.

DR. J. N. HURTY, during his recent visit to Kentucky, was slightly injured in a railroad wreck. Owing to the fact that Dr. Hurty has passed through so many storms of criticisms and abuse, a railroad wreck is a mere incident to him and was not sufficient to interrupt him in his work.

THE Children's Hospital, at Indianapolis, was incorporated according to the state laws on December 1, and includes 111 prominent citizens of Indianapolis as incorporation members, from which twenty-one directors will be elected. It will be entirely a charity hospital, and in connection with it will be a school for nurses.

AT the November meeting of the Younger Physicians' Club, Indianapolis, Dr. Stanley Coulter delivered an address on "The Solid and Enduring Satisfactions of Life." The following officers for the new year were elected: Dr. A.

Henry, president; Dr. H. S. Thurston, vice-president, and Dr. J. H. Eberwein, secretary-treasurer.

DR. AUGUST F. KNOEFEL, of Linton, Ind., counselor for the Second District, while attempting to board a moving train at Bedford, Ind., January 3, was thrown to the ground with such violence that he sustained a serious injury to the left knee. The injury is such that Dr. Knoefel will probably be confined to his bed for three or four weeks.

EXERCISES celebrating the union of the Ohio and Miami Medical colleges as the Medical College of the University of Cincinnati, were held Wednesday, Dec. 1, 1909. The address was delivered by Dr. Clarence Vaughan, dean of the College of Medicine, University of Michigan, and was followed by a reception to the officers and guests of the University.

THE New York Post-Graduate Medical School is establishing in its new buildings a full equipment of wards and laboratories for the teaching of tropical medicine. The department is being conducted under the cooperation of the U. S. Army, Navy and Public Health Services, who detail officers from their respective medical corps to assist in the conduct of the laboratory and the clinical courses.

DR. HENRY MOORE, of Indianapolis, who has superintended the construction of the tuberculosis hospital near Rockville, has resigned on account of ill health. The governor has declined to accept his resignation, but has relieved him of the arduous work. Dr. Moore has gone to Florida to recuperate, and Brubaker & Stern, the architects, are completing his work. The hospital is expected to be ready for occupancy April 1.

PROMINENT citizens have offered \$18,000 to start the new Tuberculosis Hospital at Rockville, and several more have offered to contribute, with the understanding that the legislature will make return of the funds used. The hospital will be ready for use about May 1. It is to be regretted that the legislature has made no provision for maintenance, and Governor Marshall has made no statement as to what will be done in the matter.

THE following, which was printed in a recent number of the *Huntington News-Democrat*, shows how the average news reporter can twist up anatomical knowledge given him by the physician:

"Mrs. Frontal Sinus, of Cherry Street, submitted to an operation at the Huntington Hospital this afternoon for an abscess situated in the cavity over the right eye. The patient rallied immediately after the ordeal, and is getting along as well as could be expected."

THE plans are now complete for a new sanitarium and hospital to be erected in Plymouth, Ind., by the management of the present Borton and Aspinall Institute. The institution will not only be devoted to the treatment of alcoholic, drug and tobacco diseases, but will be open for the reception and care of all general medical and surgical cases. The hospital service will be in charge of Drs. Borton and Aspinall, resident surgeons and physicians, assisted by a corps of trained nurses.

DR. HARRY C. SHARP, of Indianapolis, addressed a literary club in Milwaukee the second week in January on the subject of "Heredity and Its Influences on the Human Race." Dr. Sharp has recently been appointed chairman of the committee on the "Definition of the Practice of Medicine." This is composed of Drs. L. M. Halsey, Williamstown, N. J., E. J. McKnight, Hartford, Conn., and B. M. Caples, Waukesha, Wis. This committee will meet in Chicago on March 1 and 2, 1910, at which time its members will meet with the Committee on Medical Legislation.

MRS. MARY BAKER G. EDDY, founder and head of the Christian Science Church, in a letter published in the *Christian Science Sentinel*, advises practitioners of the faith to charge only as much as would be asked by reputable physicians. The letter is called forth as result of a doubt in the minds of many Christian Science practitioners as to a proper charge for treatment. Mrs. Eddy definitely and authoritatively fixes such charges for treatment in the following copy of letter:

"BROOKLINE, MASS., Dec. 24, 1909.

"Dear Mr. McLellan:—Christian Science practitioners should make their charges for treatment equal to those of reputable physicians in their respective localities.
MARY BAKER EDDY."

THE Fifteenth meeting of the Association of Big Four Railway Surgeons was held at the Grand Hotel, Indianapolis, on November 5. Forty-five members from Michigan, Illinois, Ohio

and Indiana were present. Dr. W. J. Means, of Columbus, Ohio, read a paper on "Compound Fractures and Dislocations." Papers were also read by Drs. George F. Beasley, of Lafayette, Ind.; L. A. Glaze, Grayville, Ill.; W. A. Fankboner, Marion, Ind.; J. H. Ford, Indianapolis; and J. J. Kyle, Indianapolis. The following officers were elected: President, J. J. Kyle; first vice-president, C. K. Smith, Kankakee; second vice-president, I. J. Becknell, Goshen; third vice-president, J. T. Musselman, Paris, Ill.; secretary-treasurer, T. C. Kennedy, Indianapolis.

DR. JAMES HONAN, of Berlin, is visiting in Rensselaer and Indianapolis. Dr. Honan organized and for a number of years was president of the Anglo-American Medical Association of Berlin. This association has done more than any other one thing to assist American physicians in their clinical work in Berlin, and many who have studied there during the last six years are under obligations to Dr. Honan for his good work in their behalf. He is also at the head of one of the leading hospitals in Berlin, and during the summer months resides at the Bad Nauheim. During his visit he has addressed several medical societies, his subject being "The Efficacy of the German Watering Places." As Dr. Honan is a native hoosier, it is with pleasure that he is welcomed back to the place of his early work.

THE Indianapolis City Board of Health has planned to extend the school inspections, which will begin under the new law, to include also the buildings and playgrounds. Several years ago a test was made of the air of one of the most beautiful school buildings of the city, and it was found that the ventilation was so imperfect that the children were breathing the same air over and over again, which accounted for the many cases of illness, both of the pupils and the teachers. The physicians will also examine the janitors and teachers, so that if any are found to be suffering from tuberculosis or other diseases of like character, they may be removed. Around the city schools small candy shops, bakeries and lunch counters have sprung up. These will also be investigated, that the children may have pure candy and pure food.

A JOINT conference of the Council on Medical Education and the Committee on Medical Legislation will be held in Chicago on Feb. 28 and

March 1 and 2, 1910. To this conference will be invited all members of the National Legislative Council, all members of state medical examining and licensing boards, especially the officers, representatives from medical colleges, members of state committees on medical education and medical legislation, as well as prominent educators, philanthropists, sociologists and economists. The first day of the session will be devoted to a conference on Medical Education, under the auspices of the Council on Medical Education. The second day will be devoted to a joint conference on the essential needs of a model medical practice act for states. The third day will be given to the routine work of the annual Conference on Medical Legislation.

THE report of the tuberculosis clinic was made to the Indianapolis Medical Society at its last meeting in November. Statistics showed that during the year 360 patients had been examined, many of them being treated. Of this number 13 were cured, 16 had the disease arrested, 59 were improved, 93 were found non-tubercular, 52 showed no improvement, 37 died and 90 were lost, their whereabouts being unknown. In nearly every case which showed no improvement, the patient has failed to follow instructions, either through ignorance or poverty. An address was made by Mayor Bookwalter, who spoke of the clinic as one of the two things which he had instituted as mayor of which he could be proud. Other addresses were made by Dr. W. T. S. Dodds; Dr. F. L. Truitt, Dr. H. S. Thurston, Dr. Alfred Henry, Dr. A. C. Kimberlin, Dr. Theodore Potter, Dr. F. A. Tucker, of Noblesville; Dr. Thomas Beasley of Rockville; Mrs. J. H. Lowes, of the Flower Mission, and Mr. C. S. Grout, of the Charity Organization Society.

ELI LILLY & COMPANY have under way a new stock building. The excavations are complete and much of the foundation is in. The location of the building is immediately east of the front section of the original plant, with which it will be connected by subway and enclosed passages. The building will be 70 x 180 feet, consisting of a sub-basement, basement and two stories giving floor space of about 4,400 square feet or a little more than one acre. The sub-basement and basement will be of reinforced concrete. The superstructure will be of brick with stone trimmings. The building above the ground will be massive, of slow-burning construction, with complete

sprinkling system. The sub-basement is designed for a storage for drugs, which are ground green and packed in alcohol. The other floors will be occupied with finished stock. The new building will provide the Lilly Laboratories with one of the finest stock buildings to be found anywhere, and it is imperatively needed to take care of the increased demand for Lilly Pharmaceuticals.

IN the District Court of the United States, District of Indiana, at the November term, 1909, Dr. Leon T. Leach of Indianapolis, was indicted on the charge of violating the Pure Food and Drugs act, in that he shipped from Indianapolis to Washington, D. C., certain medicines which were misbranded under the title of "Cancerol! a composition of essential oils for the treatment of malignant diseases, originated and perfected by L. T. Leach, M.D." Also the following: "Blood Renovator! composed of predigested oils. This preparation tones up the general system, enriches the blood and fortifies the glands against invasion by malignant cells. It does not injure the most delicate stomach, but aids and improves the appetite. Directions: Take one teaspoonful before each meal with or without water. From Park View Sanitarium. Dr. L. T. Leach Medical Director, Indianapolis, Ind."

The government contends that it is not a composition of essential oils and it does not contain predigested oils. Further investigation discovered that this is only cottonseed oil with a few minor ingredients.

The second medicine sent was a "Healing Salve! containing a mixture of vegetable and mineral oils with certain drugs of highly healing qualities. Directions: Get a piece of cloth of suitable size, spread salve on the cloth and lay over the open sore. Apply this each morning and evening." The government contends that it is not a composition of vegetable oils with certain drugs of highly healing qualities.

The third shipment sent was an unlabeled bottle, the analysis of its contents showing that it contained 14 per cent. alcohol and a certain percentage of opium. These are contrary to the Pure Food and Drugs Acts.

It is to be hoped that the government will succeed in eradicating this evil, which was started by Dr. Leach's father-in-law, Dr. Bye, several years ago, and was exposed in the *Journal of the American Medical Association* several years ago by the death of a woman in Tennessee who had been using Dr. Bye's Combination Oil Cure for Cancer.

SINCE the publication of our December number the Council on Pharmacy and Chemistry of the A. M. A. has acted on the following products:

ARTICLES ACCEPTED FOR N. N. R.

- Orphol (Schering & Glatz).
- Orphol Tablets (Schering & Glatz).
- Arsen-Triferrin (Knoll & Co.).
- Arsen-Triferrin Tablets (Knoll & Co.).
- Arsen-Triferrol (Knoll & Co.).
- Lactophenin (Merk & Co.).
- Oxyntin (Fairehild Bros. & Foster).
- Original Tuberculin "O. T." (Koch) (H. M. Alexander & Co.).
- Tuberculin-Bouillon Filtrate "B. F." (Human) (H. M. Alexander & Co.).
- Tuberculin Residue "T. R." (Human) (Koch) (H. M. Alexander & Co.).
- Bacillen Emulsion "B. E." (Human) (H. M. Alexander & Co.).
- Dixon's Tubercle Bacilli Extract (H. M. Alexander & Co.).
- Dixon's Suspension of Dead Tubercle Bacilli (H. M. Alexander & Co.).
- Tuberculin for the Cutaneous Test (von Pirquet) (H. M. Alexander & Co.).
- Tuberculin Ointment Capsules (for the Moro Test) (H. M. Alexander & Co.).
- Tuberculin for the Ophthalmic Test (H. M. Alexander & Co.).
- Tuberculins for the Detre Differential Diagnostic Test (H. M. Alexander & Co.).
- Tuberculin "Old," Koch; Concentrated (Cutter Laboratory).
- Deny's Bouillon Filtrate (Cutter Laboratory).
- Tuberculin, Koch (concentrated) (Cutter Laboratory).
- Tuberculin, Purified (Cutter Laboratory).
- Tuberculin, "Koch" (old) (Koechl & Co.).
- New Tuberculin, "Koch" (T. R.) (Koechl & Co.).
- Koch's Bacilli Emulsion (Koechl & Co.).
- Tuberculosis Diagnostic "Hoechst" Dry (Koechl & Co.).
- Tuberculin "Old" (O. T.) (H. K. Mulford Co.).
- Tuberculin Bouillon Filtrate, Denys (H. K. Mulford Co.).
- Tuberculin "R" (H. K. Mulford Co.).
- Bacillen Emulsion "B. F." (H. K. Mulford Co.).
- Tuberculin Ophthalmic Test Solution (H. K. Mulford Co.).
- Tuberculin Ophthalmic Test Tablets (H. K. Mulford Co.).
- Tuberculin Ointment (H. K. Mulford Co.).
- Tuberculin "Old" (Koch) (Parke, Davis & Co.).
- Tuberculin B. E. (concentrated) (Parke, Davis & Co.).
- Tuberculin B. F. (Parke, Davis & Co.).
- Tuberculin T. R. (Parke, Davis & Co.).
- Tuberculin Disks for the Ophthalmic Reaction (Parke, Davis & Co.).
- Moist Dead Tubercle Germs (Parke, Davis & Co.).
- Erysipelas and Prodigiosus Toxins (Coley) (Parke, Davis & Co.).
- Sterile Normal Horse Serum (National Vaccine and Antitoxin Institute).
- Antirabic Vaccine (H. M. Alexander & Co.).
- Vaccine Virus, Glycerinated Lymph, Glycerinated Vaccine Points; Dry Points (H. M. Alexander & Co.).
- Vaccine Virus, Ivory Points; Capillary Tubes (Cutter Laboratory).
- Glycerinated Vaccine Virus (Schieffelin & Co.).
- Glycerinated Vaccine Lymph (H. K. Mulford Co.).
- Glycerinated Glass Vaccine Points; Glycerinated Lymph on Sterile Glass Points (H. K. Mulford Co.).

Glycerinated Vaccine Virus Capillary Tubes and on Ivory Points (National Vaccine and Antitoxin Establishment.).

Glycerinated Vaccine—in capillary tubes, on ivory points (P. D. & Co.).

Diphtheria Antitoxin (H. M. Alexander & Co.).

Diphtheria Antitoxin Serum (Burroughs, Wellcome & Co.).

Diphtheria Antitoxin (Cutter Laboratory).

Diphtheria Antitoxin "Behring" (Koechl & Co.).

Refined and Concentrated Diphtheria Antitoxin (Globulin) (Health Department of City of N. Y.).

Diphtheric Antitoxin (Wm. R. Hubbert).

Diphtheria Antitoxin (Schieffelin & Co.).

Antidiphtheric Serum (Memorial Institute for Infectious Diseases).

Diphtheria Antitoxin, Concentrated (Globulin) (H. K. Mulford Co.).

Diphtheria Antitoxin, Concentrated (National Vaccine and Antitoxin Institute).

Antidiphtheric Serum, U. S. P. (Parke, Davis & Co.).

Antidiphtheric Globulins (Parke, Davis & Co.).

Antidiphtheric Globulins (dry) (Parke, Davis & Co.).

Diphtheric Antitoxin, U. S. P. (F. Stearns & Co.).

Concentrated Diphtheric Antitoxin (F. Stearns & Co.).

Concentrated Antitoxin (globulin) (Lederle Antitoxin Laboratories).

Tetanus Antitoxin (H. K. Mulford Co.).

Antitetanic Serum (Parke, Davis & Co.).

Coli-Bacterin (H. K. Mulford Co.).

Neisser-Bacterin (H. K. Mulford Co.).

Gonococccic Vaccine (National Vaccine and Antitoxin Institute).

Gonococcus Vaccine (Parke, Davis & Co.).

Neoformans-Bacterin (H. K. Mulford Co.).

Pneumo-Bacterin (H. K. Mulford Co.).

Pyocyano-Bacterin (H. K. Mulford Co.).

Staphylo-Bacteria (H. K. Mulford Co.).

Staphylococcus Pyogenes Albus (Parke, Davis & Co.).

Staphylococcus Pyogenes Aureus (Parke, Davis & Co.).

Staphylococcus Pyogenes Citrens (Parke, Davis & Co.).

Staphylococcus Pyogenes Albus-Aureus-Citrens combined (Parke, Davis & Co.).

Strepto-bacterin (H. K. Mulford Co.).

Streptococcus Vaccine (Parke, Davis & Co.).

Typho-bacterin (H. K. Mulford Co.).

Antigonococccic serum (Parke, Davis & Co.).

Polyvalent antistreptococcus serum (Burroughs, Wellcome & Co.).

Antistreptococcus serum (erysipelas) (Burroughs, Wellcome & Co.).

Antistreptococcus serum (rhenmatism) (Burroughs, Wellcome & Co.).

Antistreptococcus serum (scarlatina) (Burroughs, Wellcome & Co.).

Antistreptococcus serum (puerperal fever) (Burroughs, Wellcome & Co.).

Polyvalent Streptococcus serum (Cutter Laboratory).

Aronson's Antistreptococcus serum (Schering & Glatz).

Antistreptococccic serum Hoechst (Koechl & Co.).

Antistreptococccic serum Polyvalent (Schieffelin & Co.).

Antistreptococccic serum (H. K. Mulford Co.).

Antistreptococccic serum (Parke, Davis & Co.).

Streptolytic serum (F. Stearns & Co.).

Antipneumococccic serum (H. K. Mulford Co.).

Pneumolytic serum (F. Stearns & Co.).

Antityphoid serum (Burroughs, Wellcome & Co.).

Articles accepted for N. N. R. appendix:

Liquor Santaiva (S & D) (Sharp & Dohme).

Yours very truly,

W. A. PUCKNER, Secretary.

SOCIETY PROCEEDINGS

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of Oct. 26, 1909.)

Society called to order by president with seventeen members present.

Clinical case reports. Dr. H. K. Mouser reported a case of general arteriosclerosis, giving post-mortem findings and presenting pathological specimens.

Discussion by Drs. B. Van Sweringen and Porter.

Dr. B. Van Sweringen reported a case, giving his recent experience in the diagnosis of smallpox.

In the discussion Dr. Porter said he thought the Board of Health should let the physician know when he is going into these cases. He thinks it is the height of folly for physicians to visit a house with smallpox and take no precautions before leaving the house. He should wear some covering for his clothes. Also discussed by Drs. Bruggeman, Wheelock, Van Buskirk and Crull.

Dr. Glock spoke on the eye troubles in the smallpox epidemic.

Discussion by Drs. Rhamy and Porter. Closed by Dr. B. Van Sweringen.

Dr. Crull suggested that the society get a good man on hygiene to address them.

Dr. Wheelock moved that the president of the local society appoint a committee of five to be known as the committee on arrangements for the next meeting of the state association.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Nov. 2, 1909.)

Society called to order by the president, with eighteen members present.

Clinical case reports. Dr. Porter reported a case of goiter, which illustrates that a large size goiter may be carried with little inconvenience, and the comparatively little danger in removing simple goiter. One point of especial interest is taking care of the hemorrhage. Preservation of the posterior capsule is the best method of avoiding injury to the parathyroid bodies.

The second specimen was a huge fibroid attached to uterus, with a small submucous fibroid. Shown on account of size, which Dr. Porter said was the next to the largest fibroid he has ever seen, and weighed 17 pounds. Patient never knew she had it until two or three months before operation. She weighed about 160 pounds, was 34 or 35 years of age, and a virgin.

Surgical Treatment of Rectal Fistulæ was the title of a paper by Dr. W. F. Schrader, in which he said that he had treated seven cases with bismuth vaseline injections. Two cases of blind external fistula were cured; the others were not successful and the majority of the balance submitted to division rather than submit to the long course of the bismuth vaseline injections. Reported cases to show how readily some of these cases of rectal

fistulae get well with practically no treatment. One case healed nicely after removal of a piece of toothpick. Outlined preliminary treatment for preparation for operation. The most important part of after-treatment is to see that the fistulous tract heals from the bottom.

Discussion by Dr. Porter, who said that practically all cases of anal fistulae are in tubercular patients. Agreed with Dr. Schrader with reference to dissecting out of the fistulous tract.

Dr. Beall said he had read an article in which the author had had tetanus following operations on the rectum sufficiently often to warrant the giving of anti-tetanic serum.

Paper also discussed by Drs. Weaver and Gilpin; closed by Dr. Schrader.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Nov. 16, 1909.)

Society met in regular session at St. Joseph Hospital Tuesday evening, with sixteen members present. The meeting was called to order by the president. The session was in charge of Drs. Barnett and McOscar.

CASE 1.—Dr. McOscar presented a colored girl; product of a white mother. Patient taken with sudden severe abdominal pain which began with chill, then high fever, and marked rigidity of right side; suspected appendicitis. Operation, incision in the median line, and five inches of appendix removed. On manipulation tumor was found in the right side reaching to the liver. In the retroperitoneal region was found a mass with two quarts of fluid in it. A nephrotomy was made and kidney emptied. Sixteen days after operation drainage had ceased and wound healed. Within five days she was again brought to the hospital, and a nephrectomy was made. Case was probably tuberculosis of the kidney. Specimen unfortunately was lost before microscopical examination was made. At this time the urine shows some pus and blood. She has gained in weight since the nephrectomy.

Discussion by Drs. Rosenthal, Drayer, Weaver, Kane, C. E. Barnett, and closed by Dr. McOscar.

CASE 2.—Dr. McOscar also reported a case of impacted stone in the cystic duct, removed through the gall-bladder. Patient, woman 44 years of age, who had been the subject of several attacks of stomach cramp with disturbed gastric function, was attacked with chill, high fever, marked depression and extreme soreness over liver region. Incision revealed a greatly distended gall-bladder from which several gall-stones were removed with the liquid contents. No bile was found to escape from the duct. A large stone was found impacted in the cystic duct very firmly, one inch from the gall-bladder. Cautious pressure on the stone between the thumb and finger found it unyielding in its fixed position. In accordance with accepted surgical procedure one of two things could be done—either remove the stone through an incision into the duct and close the wound with gut or make a cholecystectomy. An effort was made to explore the duct from the gall-bladder. A long slender instrument, dull and looped at the end, was inserted into the duct by gentle rotary movement until it came in contact with the stone. By an alternating rotary movement the instrument was made to grind its way, and the sand resulting from the friction against the stone was brought into the gall-bladder by withdrawing the instrument from time to time. In this manner the stone was re-

duced to powder and a flow of bile into the gall-bladder gave evidence of relief of the obstruction. The usual drain was placed in the gall-bladder from which the flow continued for three weeks, when the sinus closed. There was clearly no injury to the duct, a result which could easily follow unless the most delicate manipulation is practiced. When the stone can be removed in this manner it offers a material advantage over incision of the duct, in that the peritoneal cavity is not invaded by the drained bile, and the only drain required is that within the gall-bladder.

Dr. C. E. Barnett presented a specimen of tubercular kidney from man aged 55, married, with two children. Trouble began three years ago with back pain in kidney region. Last September he noticed bladder pain and pain at end of the penis. Family history: daughter died five years ago from tuberculosis. The patient was treated by many physicians for bladder trouble, followed by increasing inflammatory conditions; urine examination by Dr. Hall disclosed considerable blood, pus and albumin. Nocturnal micturition frequency began three months ago. Bladder capacity one-fourth normal; cystoscopy; right ureter emptied pus, bladder full of pus and blood. June 4 he had pain symptoms, without palpation findings, as prominent on one side as on the other. Cystoscopy findings were the only symptoms for operation outside of the urinalysis made by Dr. Rhamy. May 5 showed quantities of tubercle bacilli and kidney detritus. The patient was sent to the hospital on June 4 and the kidney removed on the 6th. June 8, patient's condition good; had him out of bed; passed 26 ounces of cloudy urine first twenty-six hours. June 15, removed stitches (primary union) and cigarette drain, introducing iodoform gauze; condition admirable. Left hospital for home July 1.

Tuberculosis of the kidney is almost always unilateral, and if operated early before the other kidney is infected the cases are cured. Dr. Barnett says he believes he can make diagnosis in the majority of cases by observing the ureteral openings and seeing the kidneys functionate.

Woman, aged 28. Family history: mother died of tuberculosis. Present sickness began during gestation period, which is a favorable time for the development of this condition. Bladder symptoms followed forceps delivery. Last January she noticed cutting of gravel passing out of urethra larger than pin head. Had renal colic for two years. All kidney symptoms have centered in left side except just recently (March 27, 1909), when right sided fluctuating lumbar and intrascapular symptoms were present to a mild degree. Presence of blood in urine has been noticed since bladder symptoms, the urine sometimes containing 50 per cent. blood. Found t. b. in urine, but tuberculin tests negative. Cystoscopy showed left ureteral opening toward midline surrounded by ulcers, but could see no pus or urine coming from it; right ureteral opening was not seen but could see methyl blue cloud coming up through the urine. April 2, had severe pressing pain in left lumbar region. April 4, cystoscopy preceded by indigo carmine injection; blue showed from right ureteral opening in thirty-five minutes; right opening was slightly ragged but in fairly good shape, as was the right bladder wall; left ureter was blocked. Operation, April 14, 1909, left nephrectomy being done. Kidney was intensely adherent, one-half too large, and the renal substance was entirely destroyed except the lower pole; the rest of the kidney being composed of multiple cysts. April 15, quantity of urine 27 ounces.

October 17, 1909, lumbar sinus $1\frac{1}{2}$ inches deep. Bladder trouble, 75 per cent. better, gain in weight, 18 pounds.

Where there is blood in the urine we can count on one of three things, stone, tuberculosis, or cancer. Dr. Drayer spoke on renal epistaxis in addition to cases mentioned by Dr. Barnett in which the hemorrhage comes from the renal papillæ.

Dr. Barnett exhibited a specimen, prostate with vesicles, verumontanum, and ejaculatory ducts intact, patient having left hospital for his home two months ago. He also showed x-ray plates, first of patellar fracture showing healthy bone, and second from following case: Woman, aged 40, suffered injury to knee at 2 years of age. She fell one day and doctor was called in the next, and it was claimed he had not reduced fracture. Tuberculin test negative. Pus shown that had been taken from knee abscess, a portion of which had been that day injected into a guinea-pig.

Dr. Barnett next introduced cystoscope and demonstrated the hypertrophy of the middle lobe of the prostate to those present.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Nov. 23, 1909.)

Society met in regular session, with twenty-five members present. Minutes of previous meeting read and approved.

Dr. H. K. Mouser reported a case of furuncle of the scalp leading to subaponeurotic abscess with metastatic subdural abscess and septic pneumonia. Patient middle grade imbecile, aged 14 years. Family history negative. Only previous history of patient of disease was that he had favus capitis in 1906. Nov. 5, 1909, patient brought to hospital with boil in scalp situated directly over the lambda. Treated in usual way, by taking off head and using antiseptic wash. On sixth day admitted into hospital ward with marked cellulitis of scalp over region of left parietal bone; temperature, 100. Smear from pus of boil showed infection to be staphylococcus. Adjusted bichlorid pack over infected surface. Temperature varied between 99 and 102 $\frac{3}{5}$; pulse, 80 to 102; respiration, 28 to 30. November 7, incision was made at original site of boil for more complete drainage, and a fluctuating tumor detected, which proved to be, on opening, a subaponeurotic abscess from which about 1 $\frac{1}{2}$ ounces of sanguino-purulent contents was evacuated. Free drainage instituted. On November 10, chemosis of left conjunctiva appeared, together with swelling of tissues over left temple; eyes react equally to light and convergence. Patient semistuporous; some stiffness of muscles of back of neck; no Kernig; knee-jerk hyposensitive; skin hypersensitive; slight dry cough at end of expiration; abdomen negative; thorax heart rapid, with accentuated second pulmonic. Lungs: Lower left lobe presented fine crackling râles, no perceptible change in percussion note or transmission; friction rub over eighth rib in mid-axillary line. Bacteriologic examination of spinal fluid showed to be sterile. Clinical diagnosis, furuncle of scalp, penetration of pus by way of sutures or blood vessels to membranes and sinuses of brain with metastatic septic pneumonia as the immediate cause of death. Patient died November 12; post-mortem made twelve hours later revealed an abscess of the scalp extending backwards to the left parieto-occipital sutures, upwards almost to the sagittal suture, forward and downward beneath the muscle sheath of the temporal to the zygoma. On removing the calvarium free pus

exuded between the bone and dura along the left side of the superior longitudinal sinus with oozing pus through small opening of dura. Removal of dura showed 35 or 40 drops of pus on vertex of the cerebrum over the left parietal lobe. Small whitish dots over vertical pia mater of both hemispheres. Pus extended into the superior longitudinal sinus on left side. Sinuses perfectly free from inflammatory changes and pus. Slight exudation of pus from left anterior lacerated foramen. Removal of the contents of the left orbit showed no connection between the subtemporal pus and the pus exuding from the foramen as above mentioned. Pia mater vessels injected but no further signs of irritation or inflammation. Brain negative. Abdomen negative save for metastatic abscess in cortex of the left kidney. Smear not taken from this abscess. Thorax showed lungs to be full of small nodules, some containing pus. Oldest lesion in lower left lobe; septic pleuritis (left). Three small tubercular-like nodules in right apex.

Bacteriological report on smears taken during examination: Smear from right lung, lower lobe. Pus cells numerous; micrococci very numerous; intra- and extracellular, occurring in pairs, in bunches and some small chains of 4 or 5. Single organisms predominate. Those occurring in pairs are characteristic of pneumococci. An occasional thick, long blue staining bacillus, no tubercle bacilli. Slide 2: Smear from lower lobe of left lung shows micrococci as described above; no tubercle. Slides 3, 4, 5: Smears from small nodules taken from apex of right lung show pus cells numerous, with staphylococci very numerous. No tubercle. Slide 6: Smear from pus along superior longitudinal sinus shows numerous staphylococci, pus cells and cellular debris. Slide 7: Smear from same as 6 stained for tubercle—negative. Pathological diagnosis: (1) Furuncle of scalp; (2) cellulitis of scalp; (3) subaponeurotic abscess; (4) transmission of pus through sinuses and by way of blood with epidural and subdural abscess; (5) chemosis of left eye; (6) septic pneumonia of both lungs, with purulent pleuritis and metastatic abscess of right kidney.

Discussion by Drs. B. Van Sweringen, Rosenthal, Weaver and Mouser. Dr. Schrader reported case of chancre of rectum in young man resulting from practice of pederasty, and Dr. Rosenthal reported case of fistula in ano; a large horseshoe fistula circumscribing the anus. This case illustrates advantage of using methylene blue for tracing fistulas.

Hyperthyroidism was the title of a paper by Dr. J. H. Gilpin, in which he said that the thyrogenic theory has become practically accepted. He gave a résumé of drugs used in medical treatment, recommending rest in bed, careful diet, ice bag to heart, and massage. Surgery most successful. Chances for recovery better following early operation.

Discussion by Drs. Beall, B. Van Sweringen and Rosenthal. Closed by Dr. Gilpin.

Goutiness was the title of a paper by Dr. A. F. Phillips, in which he said that the supply of material causing gout should be stopped; attention given to elimination, and K. I., gr. 10 t. i. d. given with large amounts of water. Promote elimination by the skin, exercise, baths, etc.

Discussion by Dr. Buchman, who said that arthritis deformans is not related to gout. It is the quantity and not the quality of food that these people eat. Dr. Wilking said that sponginess of the gums and pyorrhea are the most prominent symptoms of gout.

The president appointed the following committee on arrangements for the state meeting in 1910: A. P. Buchman, chairman; B. Van Sweringen, K. K. Wheelock, E. A. Crull and Albert E. Bulson, Jr.
Adjourned. J. C. WALLACE, Sec.

(Meeting of Nov. 30, 1909.)

Society met in regular session in the assembly room, Nov. 30, 1909, with twenty-six members present. Minutes of two previous meetings read and approved.

Dr. C. E. Barnett reported the final findings in the knee case partially reported at St. Joe Hospital clinic two weeks ago. The maximum tuberculin injection reacted on November 12 to 102 3/5 degrees. The guinea-pig into which the pus aspirated from the knee bursa was injected, died on the tenth day showing congestion of the lungs and a perforation of the ascending colon, though no tubercle bacilli were found. The knee was operated on November 29, when the joint was opened, no infection nor bone destruction being discovered. The distended pretibial bursa was dissected out in toto and found to extend backward and inward under the biceps tendon, but did not communicate with the joint cavity. Joint closed with Halstead sutures, and drain placed at either angle of wound. The ankylosis was forcibly broken up, skin closed with catgut and leg and thigh encased in plaster. The bursal sac examined by Dr. Rhamy showed tuberculous material.

Dr. Albert E. Bulson, Jr., reported a case of dizziness, nausea and vomiting following syringing of the ears and the removal of a cheesy mass consisting of mucopurulent secretion and carious material from the middle ear in a case of chronic suppuration. The patient had been subject to dizziness and nausea on ordinary cleansing of the ears, and these symptoms became very much aggravated on removal of the cheesy mass from the middle ear cavity. Dr. Bulson said that the symptoms were due to a disturbance in the labyrinth, and would undoubtedly subside in a few hours, or at the end of a few days at the most, though the patient was compelled to go to bed on account of the persistence of the nausea on the slightest movement.

Patients frequently have this labyrinthine disturbance on syringing of even the normal ear having an intact drum membrane, but these symptoms are often aggravated in patients who have lost a large portion of the drum membrane through suppurative processes. In the case reported the symptoms were of unusual severity.

Serum Disease was the title of a paper by Dr. Geo. J. Studor, in which he gave the results of the action of horse serum on guinea-pigs. Man reacts in from eight to thirteen days to the first injection of horse serum. Urticaria and swelling are the main symptoms of serum disease. The rare cases in which there have been unfavorable results from the injection of antidiphtheritic serum should not deter physicians from the early administration of antidiphtheritic serum in a case of diphtheria.

Discussion by Drs. Bruggeman, Dancer, Weaver, G. Van Sweringen and Morgan. Closed by Dr. Studor.

Mercury in the Treatment of Tuberculosis. Paper by Dr. H. K. Mouser. The author said that the therapeutic dose is usually found to be 1/15 and 1/5 every other day for thirty injections, then stopping for two weeks. From his experience in nine cases, eight pulmonary and one of skin tuberculosis, the author came to the following conclusions: Mercury acts better as cell tonic in slow progressing cases; most benefit

derived in incipient cases. He does not believe mercury a specific in tuberculosis.

Discussion by Dr. Dancer, G. Van Sweringen, Mc-Oscar, B. Van Sweringen, Kimmell, C. E. Barnett, Gilpin and Weaver, and closed by Dr. Mouser.

The applications of Drs. I. O. Ditton, Albert Stoler and Norma B. Elles were read and referred to the board of censors.

Dr. Bulson made motion that those who joined the society between now and Jan. 1, 1910, be given credit on the books for full amount of dues for 1910. Carried.

Adjourned.

J. C. WALLACE, Sec.

BLACKFORD COUNTY.

The regular meeting of the Blackford County Medical Society was held in Hartford City, Dec. 23, 1909. The election of officers resulted as follows: President, H. C. Davisson; vice-president, J. A. Taylor; secretary-treasurer, M. M. Clapper; censors, Drs. C. W. Corey and J. C. Kirkpatrick.

Adjourned.

M. M. CLAPPER, Sec.

BOONE COUNTY.

The Boone County Medical Society met in regular session December 10, when the following officers were elected: President, C. A. Endicott, Mechanicsburg; vice-president, James Black; secretary, Herma A. Beck; treasurer, C. H. Smith; delegate, J. R. Ball.

Adjourned.

HERMA A. BECK, Sec.

CARROLL COUNTY.

The Carroll County Medical Society held its regular meeting in Delphi, December 10. Society called to order by President McCleary, with eighteen members present.

Intestinal Perforation in Typhoid Fever was the title of a paper by Dr. J. J. Shultz, in which the author stated that perforation was preventable by proper treatment.

Drs. A. C. Clouser and C. E. Angell of Delphi were readmitted to membership and Dr. T. D. Peters of Flora was admitted as a new member.

Election of officers resulted as follows: President, C. E. Angell; vice-president, H. M. Hall; secretary, W. R. Quick; treasurer, F. P. Lyons.

At the close of the meeting the doctors and their wives were entertained at a three-course dinner at the home of Dr. C. E. Angell.

Adjourned.

W. R. QUICK, Sec.

CLAY COUNTY.

The Clay County Medical Society met in regular session in Brazil. The minutes of the previous meeting were read and approved. The committee on revision of fee bill reported. The report was adopted after discussion, and the committee was instructed to have copies printed for all physicians in the county.

Extirpation of the Tonsils was the title of a paper by Dr. J. F. Smith, which the author illustrated by recent specimens preserved in formalin.

The regular annual meeting of the Clay County Medical Society was held in the Elks' Hall, Brazil. The address of the evening was given by Dr. Hurty on "The Future Hygiene." Papers were also read on "Adenoids," by Dr. Muncie, and "Abdominal Pain," by Dr. Hulsman. Discussion.

The annual election of officers resulted as follows: President, L. L. Williams; vice-president, W. M. Palen; secretary, G. W. Finley; delegate, S. G. Hollingsworth; alternate, Harry Elliott; censors, Drs. Veach, Muncie and Orr.

The dentists and pharmacists of the county were present as invited guests and an enjoyable social time was experienced.

Adjourned.

G. W. FINLEY, Sec.

DELAWARE COUNTY.

The annual meeting of the Delaware County Medical Society was held Dec. 3, 1909, with fifteen members present. The following officers were elected for the year 1910: President, Geo. R. Andrews; vice-president, C. H. Wright; secretary-treasurer, H. S. Bowles; censor, C. A. Ball. The report of the secretary-treasurer for the fiscal year of 1909 showed the following: Present membership, 52; deaths during year, 1; members suspended for non-payment of dues, 2; and members admitted during year, 1.

"Neoplasma: Their Diagnosis. Treatment and Prognosis," was the title of a very interesting and instructive paper by Dr. O. E. Spurgeon.

Adjourned.

H. S. BOWLES, Sec.

HUNTINGTON COUNTY.

The regular meeting of the Huntington County Medical Society was held December 16, for the election of officers, at the Central Café. The election resulted as follows: President, Ira E. Perry, Bippus; vice-president, J. M. Hicks, Huntington; secretary-treasurer, R. Q. Taviner; censors, W. C. Chafee, F. B. Morgan and W. F. Smith; delegate, E. W. Poinier, Andrews.

After the election of officers the members listened to a very able address on "Malpractice" by Mr. U. S. Lesh, one of the leading attorneys of the city. A smoker was one of the enjoyable features of the evening.

Adjourned.

R. Q. TAVINER, Sec.

JEFFERSON COUNTY.

The Jefferson County Medical Society held its annual election of officers Wednesday, December 8, the following officers being elected for the year 1910: President, N. A. Kremer, Madison; vice-president, S. A. Whitsett, Kent; secretary, Carl Henning, Hanover; censor, J. H. Christie, Canaan; delegate, G. E. Denny, Madison; alternate, J. H. Calvert, Milton, Ky.

Adjourned.

CARL HENNING, Sec.

KNOX COUNTY.

The Knox County Medical Society held its annual banquet at the Boog Hotel in Vincennes, Dec. 15, 1909. Dr. S. C. Beard acted as toastmaster. Aside from a paper by Dr. John W. Sluss of Indianapolis, on "Spinal

Anesthesia," the program consisted of a number of three-minute talks, and a spirit of good fellowship prevailed.

The following officers were elected for 1910: President, Clarke E. Stewart; vice-president, Wm. H. Davenport; secretary-treasurer, Chas. S. Bryan; censor, Maurice G. Moore.

Adjourned.

CHAS. S. BRYAN, Sec.

KOSCIUSKO COUNTY.

The Kosciusko County Medical Society held its regular meeting December 28. Minutes of previous meeting read and approved. The officers for 1910 were elected by ballot with the following result: President, M. G. Yocum, Mentone; vice-president, T. J. Shackelford, Warsaw; secretary-treasurer, C. N. Howard, Warsaw; censor, C. E. Thomas, Leesburg; delegate, P. G. Fermier, Leesburg; committee on program and scientific work, Drs. C. C. DuBois, chairman, Warsaw, F. J. Young, Milford, and G. W. Anglin, Warsaw; committee on public health and legislation, Drs. N. A. Carey, chairman, Silver Lake, C. E. Leedy, Piercetown, and J. E. Potter, Milford. Dr. T. J. Shackelford, vice-president, was elected essayist to represent Kosciusko county at the meeting of the Thirteenth District Medical Society, to be held in Goshen during the last week in April, 1910.

There were no scientific papers scheduled for this meeting, but a general discussion bearing on the welfare of the society. A general feeling of good will and kindness was the keynote of all the talks. Many of those present expressed their interest in the society and their belief that the year of 1909 had been the best the society had ever seen.

Adjourned.

C. NORMAN HOWARD, Sec.

MARSHALL COUNTY.

The Marshall County Medical Society, at its regular meeting, Dec. 30, 1909, elected the following officers for the year 1910: President, H. P. Preston; vice-president, H. H. Tallman; secretary, O. A. Rea; treasurer, L. D. Eley; censors, Drs. R. C. Stevens, E. E. Parker and S. C. Loring; delegate, E. E. Parker; alternate, C. F. Holtzendorf.

Dr. Loring read a paper entitled "The Diagnosis of Gonorrhea in the Female," which was discussed by Dr. Stevens and others.

Adjourned.

O. A. REA, Sec.

PORTER COUNTY.

The Porter County Medical Society met in regular session, December 7, at Valparaiso, with President Take in the chair. Election of officers resulted as follows: President, J. F. Take; vice-president, O. B. Nesbit; secretary, G. R. Douglas; censor, D. J. Loring; vice H. M. Evans, retired.

The name of Dr. Gowland was presented for membership and referred to the board of censors. The report of the secretary for 1909 was read and approved by the society.

Pelvic Peritonitis was the title of a paper by Dr. D. J. Loring. The author thinks this title a misnomer, pelvic peritonitis being a secondary disease, and a plea was made for more scientific nomenclature. The peritoneum can only be invaded in two ways, directly from

without by way of the Fallopian tubes or by extension through the lymphatics. The most common cause is gonorrheal salpingitis, and the treatment palliative until the attack is over, then removal of one or both tubes, as the case demands. General discussion.

Adjourned. G. R. DOUGLAS, Sec.

SPENCER COUNTY.

The Spencer County Medical Society met in regular session December 29, with President Gwaltney in the chair. Minutes of previous meeting read and approved. Election of officers resulted as follows: President, G. B. DeTar, Lake; vice-president, C. S. Baker, Chrisney; secretary-treasurer, H. Q. White, Grandview; censor, H. G. Weiss. The application of Dr. P. J. Coultas of Chrisney was presented, and he was received into the society. Dr. N. A. James of St. Minrad made application for reinstatement, which was accepted.

The subject of circumcision was taken up and discussed by Drs. Harron and Lang.

Adjourned. H. W. WHITE, Sec.

STEBUEN COUNTY.

The annual meeting of the Steuben County Medical Society was held Dec. 20, 1909. No papers having been prepared, clinical cases were reported and discussed and the time taken up with a discussion of "the good of the society," it being the general consensus of opinion that the physicians of the county who were never seen at county, district, state or any medical society were needed by the society to strengthen it, even if they do not need the society to help them in their practice.

The election of officers resulted as follows: President, P. N. Sutherland; vice-president, J. F. Cameron; secretary-treasurer, H. D. Wood; censor, M. T. Ritter, and delegate, W. H. Waller.

Adjourned. M. T. RITTER, Sec.

ST. JOSEPH COUNTY.

The twenty-fourth special annual meeting of the St. Joseph County Medical Society was held in the banquet hall of the Oliver Hotel, South Bend, November 30. Approximately one hundred and fifty physicians were present, coming from neighboring towns in Northern Indiana and Southern Michigan.

The following papers were read and discussed: "The Tonsil and Its Relation to Constitutional Diseases," Dr. E. J. Lent, South Bend; "Operations on Handicapped Patients," Dr. Geo. W. Crile, Cleveland, Ohio; "The Relation of the General Practitioner to Operative Obstetrics," Dr. Reuben Peterson, Ann Arbor, Mich.; "The Diagnosis of Some of the More Common Gynecological Diseases," Dr. Thos. J. Watkins, Chicago; "Some Recent Experiences in Vaccine Therapy," Dr. Geo. W. McCaskey, Fort Wayne, and "The Immediate and Remote Effects of Focal Infection," Dr. Frank Billings, Chicago.

E. J. Lent, M.D., South Bend, Ind., read a paper on "The Tonsil and Its Relation to Constitutional Diseases." (Abstract.)

"Tonsil" is used in a general sense, including all lymphatic tissue in the throat known as Waldeyer's ring. Pathologic bacteria often gain entrance into the tonsil and thence to the general circulation. He then described the embryology, anatomy and physiology of

the tonsil. Physiologically, the tonsil presents a problem difficult of solution, inasmuch as evidence of its functional importance is meager and largely hypothetical. The epithelial covering of the tonsil usually acts as a barrier, preventing penetration of bacteria. When these epithelial cells are impaired infection may occur. Many diseases, as tuberculosis, rheumatism, endocarditis, pleuritis, peritonitis, meningitis, nephritis and others may be due to a preceding infection of the tonsil. As a result of hypertrophied tonsils and adenoids we have mechanical complications as high-arched palate, deviated septum and vicious alignment of the teeth. Total enucleation of diseased tonsils and ablation of adenoids are recommended.

Dr. G. W. Spohn, Elkhart, in opening the discussion, stated that the tonsil, the whole lymphatic ring, is of great importance to both the specialist and general practitioner. Any operation done on the tonsils must be complete and nasal respiration reestablished. He then mentioned some of the theories in favor of and against the defensive action of the tonsil.

Dr. W. A. Hager, South Bend, said that much discussion relative to the defensive or contrary action of the tonsil is useless. The point is, healthy tonsils do not require removal. Diseased tonsils should be removed and any operation done must be thorough.

Dr. Locke, orthodontist, Grand Rapids, Mich., showed by plaster casts changes in shape of the jaws and oral cavity caused by neglected hypertrophied tonsils. Mouth-breathing causes excessive muscular action on the lower jaw particularly. When these permanent changes have occurred, merely removing the tonsils will not cure the mouth-breathing. Some mechanical or surgical treatment is necessary to restore the jaws and teeth to a normal condition.

Dr. Eby, Goshen, stated that he believes the tonsils, as the beginning of the lymphoid structures, have a different function from other lymphoid glands; they have greater absorptive power. He denounced "whole-sale" tonsilleotomies; such operations should be reserved for properly selected cases.

Dr. Lent closed the discussion.

Dr. G. W. Crile of Cleveland, Ohio, was unable to be present. He was to have read a paper on "Operations on Handicapped Patients."

Dr. Reuben Peterson, Ann Arbor, Mich., read a paper on "The Relation of the General Practitioner to Obstetric Surgery." The modern tendency in medicine is toward specialism. The surgeon is compelled to be a specialist and often forced to specialize in his own speciality. There is, however, a notable exception—there is little tendency to specialize in obstetrics, and there are, perhaps, two reasons; first, small returns for work which is often trying and disagreeable, and, second, the general practitioner always retains his obstetric practice and insists on doing his own obstetric surgery. Dr. Peterson recommends that any and all necessary obstetrical operations be done by the general practitioner and he should be prepared to do them well. Some of the most brilliant obstetrical surgery has been done in the country. The general practitioner must, however, be more than a mere cutter. He must be prepared to do good work. The preliminary examination of the patient, before labor, is a matter of prime importance. Aseptic obstetric surgery must be insisted on. Students must be thoroughly taught aseptic technic, not alone as pertains to the operating room but how to conduct operations with the nearest approach to asepsis in homes of patients. Obstetrical surgery as generally

practiced is not what it should be. Hope for reformation lies in training young men; men past forty with slovenly habits will probably carry them to the grave.

Dr. Stoltz, South Bend, opened the discussion. He approves of the stand taken by Professor Peterson. He feels that the public is often unwilling to cooperate with physicians in the matter of preliminary examinations, etc. Pregnancy is regarded as an absolutely normal process, and unless some pronounced complication arises physicians do not have the opportunity to make urinary and other necessary examinations.

Dr. D. L. Miller, Goshen, continuing the discussion, said that few physicians are able to do all things; specialists are needed. He advised calling in the best man obtainable when his services are demanded. Often what shall be done in a given case depends on local conditions.

Dr. Peterson closed the discussion.

The president at this point took occasion to thank the visitors for their attendance and participation in the discussions.

Dr. J. B. Berteling, South Bend, demonstrated the operation of perineal prostatectomy and exhibited a specimen of adenomatous tumor of the prostate removed by him from a man eighty-two years of age, with recovery of the patient.

Dr. George W. McCaskey, Fort Wayne, gave an interesting and valuable talk on vaccine therapy, explaining its principles and application and relating some of his recent experiences. He is enthusiastic about the results obtained. His cases were thoroughly worked out and his arguments convincing.

Dr. Harvey Martin, La Porte, reviewed a case of *B. coli* infection in which the patient made prompt recovery after treatment with an autogenous vaccine.

Dr. J. B. Porter, Elkhart, reviewed some of the recent literature on this subject and stated that physicians in small towns, without proper laboratory facilities, would naturally be handicapped in applying this means of treatment.

The society adjourned to the dining room, where dinner was served to over one hundred.

The evening session was opened by Dr. Frank Billings, Chicago, who delivered a lecture on "The Immediate and Remote Effects of Focal Infection." He defined the terms used in the title as follows: by focal infection is meant infection in any limited area of the body; by immediate effect, that on such limited area or tissue surrounding it, and by remote effect, that on distant organs. The mouth and throat are easily infected. The teeth and gums frequently are diseased. The tonsils are often a source of infection. Repeated infection of the tonsils results in the formation of adhesions binding tonsils and the pillars with resulting little pockets of infection. The various sinuses of the head, Highmore, ethmoid and frontal, the middle ear and mastoid are focal points of infection where drainage is imperfect or impossible. In the gastro-intestinal tract the esophagus, stomach and intestine are seldom subject to focal infection, but two appendages of the tract are frequently involved, namely, the gall-bladder and appendix. The rectum may show focal infection. Frequently the removal of hemorrhoids not only relieves suffering but improves the general health because a point of infection has been removed. Bacterial infection of the urinary organs is ordinarily of no consequence. Many urines show *B. coli*, but such infections are not dangerous unless drainage is poor, and then we have symptoms of infection. Such obstruction must be removed, and then by vaccine therapy the in-

fection may be cured. The prostate is very frequently the site of focal infection, particularly by the gonococcus. This organism may live indefinitely; twenty-three years, according to one writer; seventeen years and thirteen years in two cases under his care.

Dr. Billings then reviewed several cases illustrating various phases of the subject. A young man with staphylococcus pyemia had an infected carious tooth from which the staphylococcus was obtained; he developed a malignant endocarditis and died. Post-mortem showed carious bone in the jaw from which cultures of the staphylococcus were obtained.

A case of polyneuritis showed a small focus in the gum from which a culture was obtained. This was of a bacillus which was not identified. Unfortunately, the original culture was destroyed by mistake, so that it could not be completely studied. However, an injection of the bacillus into a rabbit produced paralysis and finally death in forty-eight hours. Incising and thoroughly cleaning out the original abscess resulted in a cure in two weeks' time.

A man of fifty had furunculosis. His urine was negative. In his mouth was a crowned tooth, underneath the crown an abscess was found and appropriate treatment resulted in a cure in a week.

The association of rheumatism, endocarditis and nephritis with tonsillitis is well known. Adenoids cause enlarged glands in the neck.

The antrum of Highmore should be inspected by the use of an illuminator in people who complain of headache and neuralgia.

The gall bladder may contain stones without infection or we may have a slow chronic cholecystitis without symptoms or symptoms of dyspepsia due to motor insufficiency. But chronic cholecystitis leads to certain changes that are characteristic. He then related his own case. In 1896 he had chills and fever and hemorrhages under the skin and was thought to have had malaria. Certain organisms were found in the blood which favored this diagnosis.

After a few weeks his condition was improved, but a few years later he had another attack and general breakdown. He noticed considerable tenderness over the gall-bladder, his heart action was rapid and irregular, blood pressure increased, and urine showed hyalin and granular casts. In 1903 he submitted to an operation; the gall-bladder was found adherent and infected. The adhesions were released and the gall-bladder drained, and since that time he has enjoyed good health and is as active as any man of his age. The myocardium seems restored and the blood pressure is now normal. Removing the focal infection has resulted in a restoration to health.

The appendix as a source of infection is of vast importance. Many times the removal of an appendix the seat of an old infection results in the removal of remote effects.

In the genitourinary tract the prostate is frequently found the site of old gonorrheal infection. Massaging these prostates we get a secretion containing gonococci. In cases of gonorrheal rheumatism, massaging the prostate not only gets rid of the bacteria but certain juices are expressed which act as vaccines and assist in clearing up the condition. We have infections of the kidney by *B. coli* which yield promptly to vaccine therapy.

Dr. J. C. Fleming, Elkhart, stated that he regarded the infections described as focal as highly important. The thorough manner in which these cases have been studied teaches us to look for them as we never have before.

Dr. T. A. Olney, South Bend, stated that he feels that many of the cases of "recurring la grippe" are really cases of focal infection of the sinuses of the head. He knows of a case where the patient has a recurrence of so-called la grippe every five or six weeks. In this patient there is probably some sinus involvement, and he feels that if this were found then proper treatment would clear up the condition. One thing to be learned from this paper is that these focal infections should be sought for, and when found promptly treated.

Dr. T. J. Watkins, Chicago, gave a talk on "Diagnosis of Some of the More Common Gynecological Diseases." He exhibited history blanks used by him and his assistants in Wesley Hospital and demonstrated his method of conducting an examination of a patient and then gave a number of findings for and against certain common diseases.

Dr. C. N. Howard, Warsaw, opened the discussion by stating that he is impressed with the idea that an examination of a woman could be made too forcibly. Palpation should be lightly done. He also enumerated some mistakes in diagnosis.

In closing, Dr. Watkins stated that he frequently found difficulty in making a diagnosis and that occasionally, even with the abdomen opened, it is difficult to tell just what condition presents itself. However, one should be just as systematic and painstaking as possible, realizing that there are many difficulties in diagnosis.

A vote of thanks was given those who have appeared on the program.

Adjourned.

CHARLES S. BOSENBURY, Sec.

VIGO COUNTY.

(Meeting of Oct. 5, 1909.)

The Vigo County Medical Society met in regular session, with fifty-one members present. The meeting was called "An Old Boys' Reunion," and there were members present who had not attended a meeting of the society for from ten to twenty-five years. A diploma was awarded the one who could prove his absence for the longest period. In short talks the history of the society was recounted, Dr. S. J. Young giving the history from the beginning of the society in the early 40's up to the reorganization in 1874. Drs. Roberts, Mattox and Boor related the progress since then. Dr. K. K. Wheelock of Fort Wayne was a visitor.

(Meeting of Oct. 19, 1909.)

Society met in regular session, with eighteen members present. Dr. Fink read a paper on a case of tetanus treated by intraspinal injections of magnesium sulphate with recovery. In this case tetanus developed ten days after being injured by a blank cartridge. Immediately 20 minims of 25 per cent. magnesium sulphate solution was injected after letting out some of the cerebrospinal fluid and the injections, six in all, were repeated as often as the symptoms reappeared. Dr. Jett said when tetanus developed under seven days the case would be fatal under any treatment, and that in this case it was the relief of the tension that effected the cure.

(Meeting of Nov. 9, 1909.)

Dr. B. V. Caffee presented five children reacting from the vaccination tuberculin test to prove that the Von Pirquet test is very delicate and reliable in children, much more so than in adults. Dr. Gillum spoke

of the Rosenberger method of detecting tubercle bacilli in the blood and said that he had tried it a number of times but without success. He was more successful in detecting them in the feces.

The legislative committee reported that all candidates for school trustee in the municipal election had sent in letters declaring themselves in favor of medical inspection of schools.

(Meeting of Nov. 23, 1909.)

Society met in regular session at the Union Hospital, with twenty-seven members present. A number of cases were shown, among them being an extensive streptococcal and staphylococcal infection rapidly recovering under vaccine treatment, and one of primary sclerosis of the pyramidal tract.

(Meeting of Dec. 7, 1909.)

The annual election of officers resulted as follows: President, J. R. Yung; vice-president, T. C. Louks; secretary-treasurer, C. N. Combs; delegates, M. A. Boor and M. R. Combs; alternates, E. W. Layman and J. R. Yung; censor, B. V. Caffee.

Drs. J. E. Hewitt, J. R. Love and D. C. Shaff were elected to membership.

Immunization with Diphtheria Antitoxin was the title of a paper by Dr. J. H. Weinstein. A girl was admitted to the Rose Orphan's Home, apparently in good health, but in a few days she developed a sore throat, a smear from which showed a pure culture of Klebs-Löffler bacilli. In the meantime she had attended a party at the home and had exposed every child to the infection. The ninety-three inmates of the Home were each given 1,000 units. At intervals up to two weeks the throat of every child was inspected and there were no signs of the disease. Since fifty of the children had enlarged tonsils, there was every chance for the spread of the infection. There was a striking lack of by-effects, as only two evidenced any erythema and there were no joint pains.

BOOK REVIEWS

AN EPITOME OF DISEASES OF WOMEN. By Charles Gardner Child, Jr., M.D. (Yale), Clinical Professor of Gynecology, New York Polyclinic Medical School and Hospital. 12mo, 210 pages, with 101 engravings. Cloth, \$1.00 net. Lea & Febiger, Philadelphia and New York, 1909. *Lea's Series of Medical Epitomes*. Edited by Victor C. Pederson, M.D., New York.

This one of the medical epitome series is an excellent little manual whose composition shows careful discrimination in the selection of the important gynecological conditions and the consideration of the fundamental principles of each.

The illustrations, which are numerous, are well chosen. A list of questions covering the text is added for the benefit of students.

THE ANNALS OF SURGERY.

The December number of the *Annals of Surgery* (Philadelphia), which completes the fiftieth volume of that journal, is worthy of more than passing notice. It is a jubilee number, and, by its size and the character of its contents, fitly marks so important an event in its history. The cosmopolitan character of the journal is seen from the list of contributors, which com-

prises the leaders in surgery of England, Scotland, Denmark, France, Italy, Hawaii, Canada, and the United States.

Twenty-two articles form a number of more than four hundred pages. The illustrations, some of which are colored, are profuse, making a volume which merits the term of a jubilee number. Such an event in the history of any medical journal is worthy of note.

CLINICAL EXAMINATION OF THE URINE AND URINARY DIAGNOSIS. By J. Bergen Ogden, M.D., Medical Chemist to the Metropolitan Life Insurance Company, New York. Third edition, revised. Octavo of 427 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$3.00 net.

It is most convenient to have a reference volume which combines the most approved working methods for urine analysis both qualitative and quantitative, and the diagnosis and differential diagnosis of disturbances and diseases of the kidneys and urinary passages.

This third edition has been changed to include the newer methods and to bring the technique to a higher degree of efficiency. An appendix in three divisions has been added; the first covers rather briefly the tests to be applied and the methods of application in the examination of the urine for the purpose of life insurance; the second, method of recording urinary examination; the third, a list of reagents and apparatus for qualitative and quantitative analysis.

DORLAND'S AMERICAN ILLUSTRATED MEDICAL DICTIONARY. A new and complete dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Nursing, and kindred branches; with new and elaborate tables and many handsome illustrations. Fifth revised edition. By W. A. Newman Dorland, M.D. Large octavo of 876 pages, with 2,000 new terms. W. B. Saunders Company, Philadelphia and London, 1909. Flexible leather, \$4.50 net; indexed, \$5.00 net.

This fifth revised edition contains many new words; the author says more than 2,000. Many biologic terms which occur frequently in medical literature, as well as additions covering the terminology of parasites and the latest classification of the proteins are to be noted. In addition to the well-chosen illustrations that appeared in the fourth edition is a plate showing the regions of the body according to the terminology of the B. N. A.

The clear topography, together with the convenient size, make the book an attractive and useful volume, such as should find a place on the desk of every medical man.

ORTHOPEDIC SURGERY FOR PRACTITIONERS. By Henry L. Taylor, M.D., Professor of Orthopedic Surgery and attending Orthopedic Surgeon, New York Post-Graduate Medical School and Hospital, etc. Assisted by Chas. Ogilvy, M.D., and Fred H. Albee, M.D. Pp. 503, with 254 illustrations. Cloth. D. Appleton & Co., New York and London, 1909.

As is intimated in the prefatory remarks to this contribution, the aim has been to reach the man who first comes in contact with the crippling deformities of both children and adults, viz., the general practitioner. And inasmuch as most all of such patients do first present themselves to the family physician, it behooves him to become cognizant of the many comparatively simple methods that, applied early, may serve either as a permanent cure or at least a preventative against further deformity and, in some cases, even death.

While the work is not as complete in statistical data as would make it a desirable reference book on the subject, yet the descriptions are concise, the illustrations both excellent and profuse, and the print of the most commendable type.

PRINCIPLES AND PRACTICE OF PHYSICAL DIAGNOSIS. By John C. DaCosta, Jr., M.D., Associate in Clinical Medicine, Jefferson Medical College, Philadelphia. Octavo of 548 pages, 212 illustrations. W. B. Saunders Company, Philadelphia and London, 1908. Cloth, \$3.50 net.

Appropriately preambled by a quotation from Keen to the effect that "with all our instruments of precision, useful as they are, nothing can replace the watchful eye, the alert ear, the tactful finger, and the logical mind which correlates the facts obtained through all these avenues of information and so reaches an exact diagnosis." Dr. DaCosta's work has combined all data to be obtained by physical means, with just enough pathology and laboratory results to make the work both interesting and useful.

The author's rich experience in internal medicine, accompanied by a thorough working knowledge of pathology, enables him to put into concise form a vast amount of material that is thus rendered easily accessible to both student and practitioner.

The illustrations are original, profuse and well done, the printing and binding all that could be desired.

MEDICAL SOCIOLOGY. A Series of Observations Touching Upon the Sociology of Health and the Relations of Medicine to Society. By James Peter Warbasse, M. D., Surgeon to the German Hospital, Attending Surgeon to the Seney M. E. Hospital; member of the American Society of Sanitary and Moral Prophylaxis, etc. D. Appleton & Co., New York and London, 1909. Cloth, \$2.00.

It will be of interest to readers to know that such an admirable little work on medical sociology is available. Dr. Warbasse has in a very pleasing style presented the various phases of the sociology of health. Part two of this work is devoted to medical science and medical art. It is the author's hope that this little volume may help to break down the barrier between the physician and the public caused by the lack of confidence in the public on the part of the medical profession, its aloofness in denying the people important knowledge which would be of service to them, which aloofness, no doubt, has been prompted by the fear that a little knowledge might do more harm than good, and by the ethical desire not to be misunderstood or charged with self-exploitation.

Altogether, this collection of essays will hold the interest alike of physician and layman.

A HAND-BOOK OF MEDICAL DIAGNOSIS. For the use of Practitioner and Students. By J. C. Wilson, A.M., M.D., Professor of the Practice of Medicine and Clinical Medicine in the Jefferson Medical College and Physician to its Hospital; Physician to the Pennsylvania Hospital; Physician-in-Chief to the German Hospital, Philadelphia. 408 text illustrations and 14 full-page plates. J. B. Lippincott Company, Philadelphia and London, 1909. Cloth, \$6.00.

This new hand-book of medical diagnosis is conveniently arranged in four parts: (1) Medical Diagnosis in General; (2) The Methods and Their Immediate Results; (3) Symptoms and Signs; (4) The Clinical Applications, each following the other in logical sequence.

In looking over the book one is impressed with the comprehensive way in which the author expresses himself. The subject matter being so very extensive, it is especially commendable that he should have eliminated many theoretical considerations of minor importance and given preference to the practical ones in the treatment of clinical and laboratory subjects. The methods of application of some of the newer tests in diagnosis are not given specifically. However, the author may consider this within the province of works covering essentially laboratory methods.

The text is well illustrated and free use of clinical charts is made. The pages on diagnosis of diseases of the eye were written by Dr. Sweet; those on the stomach and intestines mainly by Dr. Gwyn; those on the nervous system by Dr. James Hendrie Lloyd and the late William Pickett; those on *x-ray* diagnosis by Dr. Moore, and those on examination of the blood, urine, sputum and other fluids by Dr. J. F. Kalteyer.

EPOCH-MAKING CONTRIBUTIONS TO MEDICINE AND SURGERY.—Epoch-making Contributions to Medicine, Surgery, and the Allied Sciences; being reprints of those communications which first conveyed epoch-making observations to the scientific world, together with biographical sketches of the observers. Collected by C. M. B. Camac, M.D., of New York City. Octavo of 435 pages, with portraits. W. B. Saunders Company, 1909. Artistically bound, \$4.00 net.

This compilation will be welcomed by the connoisseur of medical literature. The series of reprints includes Lord Joseph Lister's article "On the Antiseptic Principle of the Practice of Surgery;" Wm. Harvey's contribution, "An Anatomical Disquisition on the Motion of the Heart and Blood in Animals;" Leopold Auenbrugger's paper on "Percussion of the Chest," the latter being a translation by John Forbes, M.D., as well as is the following treatise by R. T. H. Laënnec, "On the Diseases of the Chest and on Mediate Auscultation;" Edward Jenner's communication on "An Inquiry into the Causes and Effects of the Variolæ Vaccinæ;" Wm. T. G. Morton's "Remarks on the Proper Mode of Administering Sulphuric Ether by Inhalation," together with a reprint of the "Account of a New Anesthetic Agent as a Substitute for Sulphuric Ether," which latter is introduced, not as epoch-making, but for its historic interest, and finally the article of Oliver Wendell Holmes on "The Contagiousness of Puerperal Fever."

The profession is much indebted to Dr. Camac for his efforts in bringing into one accessible volume papers which are of universal interest. Each contribution is accompanied by a biographical sketch of its author, together with references to his other writings. The volume is artistically bound and reflects credit upon the publishers in the quality of its make-up.

MINOR OPHTHALMIC AND AURAL TECHNIQUE. By Alfred Nicholas Murray, M.D., Chicago, Assistant in the Department of Otology, Rush Medical College, Chicago. With 98 illustrations in the text, reproduced from photographs and original drawings. 248 pages. Cloth. Price, \$3.00. Cleveland Press, Chicago, 1909.

As stated in the preface and indicated by the title, this book deals only with minor procedures about the eye and ear, and is by no means a complete text-book on the subject of ophthalmology and otology. It is intended for and will be found most useful to the gen-

eral practitioner, though the specialist will find in it some information which will not be found in more pretentious works.

The chapters on operations, preparations therefor, and after treatment, as also the chapters on therapeutics and minor procedures, are particularly interesting and valuable, though the entire text shows care in its preparation and adherence to modern teaching and practice.

Except for several conspicuous typographical errors, the mechanical make-up of the book is very satisfactory. The illustrations, all from original photographs and drawings, add much in elucidating the text. The book should meet with the approval of those for whom it is intended.

PRACTICAL DIETETICS. WITH SPECIAL REFERENCE TO DIET IN DISEASES. By W. Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College, New York City; Visiting Physician to the Presbyterian and Bellevue hospitals. Fourth edition, illustrated, enlarged and completely rewritten. D. Appleton & Co., New York and London, 1909. Cloth, \$5.00.

Great progress has been made in the study of dietetics since the issue of the first edition of Dr. Thompson's work in 1895. The indiscriminate dietaries loosely prescribed by physicians are being largely overcome since the publication of the excellent books on practical dietetics.

The first half of this book is devoted to the classification of foods, giving source, nutritive value and general information concerning each. Stimulants and beverages, condiments and spices, are then considered fully. Food preparation, in its preservation, and the quantity of food required, as well as an account of the digestive process in various portions of the alimentary canal, are given in a clear, and scientific manner.

The latter half of the text takes up the various disease conditions, giving dietaries to be recommended in each. This section is of great value to the practitioner for quick reference in selecting diet for individual cases. Dr. Thompson has given a systematic and exact form for prescribing dietaries. Following this the army and navy rations and numerous "cures" are treated of.

Infant feeding, diet for school children, and hospital dietaries form interesting chapters.

An appendix of receipts for invalids' food and beverages under classified headings completes this very instructive and useful work. It is to be recommended as one of the foremost publications on a subject with which every well qualified physician should be thoroughly familiar.

TEXT-BOOK OF HYGIENE. A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By George H. Rohé, M.D., late Professor of Therapeutics, Hygiene and Mental Diseases in the College of Physicians and Surgeons, Baltimore, etc., and Albert Robin, M.D., Professor of Pathology, Bacteriology and Hygiene, Medical Department Temple University and Philadelphia Dental College; Bacteriologist City Water Department, Wilmington, Del., etc. Fourth revised and enlarged edition, with many illustrations and valuable tables. F. A. Davis Company, Philadelphia, publishers, 1908.

The important advances in hygiene and sanitary science, especially in the field of causation and prevention of infectious diseases, has made it necessary to revise the third edition of this well-known work in accordance with modern scientific conception of the subject.

Several contributors particularly qualified in their special lines of study have assisted in the revision. Among these are Surgeon-General Walter Wyman, of the U. S. Public Health and Marine-Hospital Service, who has revised the chapter on Quarantine; Dr. Francis W. Upshur, of the University College, of Richmond, Va., who prepared the articles on School Hygiene, Clothing, and Personal Hygiene; Surgeon-Major Walter D. McCaw, of the army, who rewrote the section on Military and Camp Hygiene, and Surgeon-Major Henry G. Beyer, of the Army and Navy Medical School, who rewrote the chapter on Naval Hygiene.

The subject of school hygiene is well considered, in so far as there is such active interest taken in the necessity for medical inspection of schools in recent years.

The chapter on epidemic diseases has had valuable additions since much research and observation have added to the knowledge of germ dissemination. The consideration of prophylaxis in contagious diseases, particularly in venereal diseases, is unfortunately not very complete. The medicinal measures suggested in the way of preventive therapeutics in the latter diseases would seem rather superfluous.

THE DIAGNOSTICS OF INTERNAL MEDICINE. By Glenworth Reeve Butler, M.D., Sc.D., LL.D., Physician-in-Chief, Methodist Episcopal Hospital, Borough of Brooklyn, N. Y., etc. With five colored plates and 272 illustrations and charts in the text. Third revised edition. D. Appleton & Co., New York and London. Cloth, \$6.00.

Since the first edition appeared, Dr. Butler's book on diagnosis has been deservedly popular, both as a text and reference work. It has been written from the point of view of practical clinical work, and the author has taken into consideration the fact that the physician meets primarily symptoms and signs, and subsequently it is decided that the symptoms found indicate the presence of a specific ailment. The volume is therefore divided into two parts: first, a study of symptoms and their indications, and, second, a study of diseases and their characteristics. Part one comprises (1) a brief consideration of the clinical anatomy and physiology of certain organs and systems; practical points

of every day utility. 2. A description of the approved methods of examination. It has been well said by a capable reviewer that "the basis of the art of diagnosis is a thorough knowledge of clinical methods." 3. A careful consideration of the many signs and symptoms encountered in the practice of internal medicine. 4. A statement of the diagnostic significance of each sign and symptom, i. e., the disease or diseases, the presence of which is more or less strongly suggested by the finding of a given sign or symptom. While a prominent symptom seldom leads directly to the discovery of a disease, yet it is of importance to know the diagnostic value of individual symptoms. Part II. comprises diagnosis, direct and differential, and contains (1) succinct descriptions of recognized diseases and their symptoms, with (2) special reference to the diagnosis, direct or differential, of each disease. The qualifying terms applied to diagnosis are scientifically indefensible, but clinically useful.

This third edition has not been changed markedly, but some interesting additions and modifications have been made. The section on karyoscopy has been omitted as occupying space which can be used to better advantage, and the section on x-ray diagnosis has been curtailed for a similar reason. The section on examination of the stomach contents and feces has been much improved, and all other sections have been subjected to careful revision. In this period of awakened interest in tropical diseases it is fitting that a chapter on these maladies, which hitherto have been considered but lightly or not at all, should be added to a work of this kind. More detailed consideration of each would not have been amiss. Also new is the section on life insurance examination. This gives numerous suggestive points to be noted in such an examination, as well as some comparative tables. The various diagnostic tests are all well given. These include the latest methods of application of the tuberculin tests and the Wassermann test for syphilis with the Noguchi modification. Much space and attention have been given to the subject of modern laboratory methods, as the author fully appreciates the great value of these aids in arriving at a correct diagnosis and in aiding in the decision of correct treatment. Much attention is also given to the importance of symptoms, both subjective and objective.

The author well says that everything has been subordinated to the main purpose of the book, which is to facilitate in a practical way the making of a thorough examination and a correct diagnosis. Special care has been taken to secure clearness and an appropriate arrangement. The mechanical work of the publishers is all that could be desired.

THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

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NUMBER 2

ORIGINAL ARTICLES

ACUTE DILATATION OF THE STOMACH.

ETIOLOGY, SYMPTOMATOLOGY, DIAGNOSIS AND
PROGNOSIS.*

EDWIN WALKER, M.D.
EVANSVILLE, IND.

The occurrence of acute dilatation of the stomach after surgical operations has been long recognized, but only of recent years has it been generally acknowledged. It is much more frequent than we have thought, and if early recognized, can often be relieved.

Acute dilatation of the stomach from any cause was first described by C. Hilton Fagge in 1873. He reports two fatal cases, one due to a retroperitoneal abscess discharging into the duodenum; seven pints of fluid were evacuated by a stomach tube, but the patient died of exhaustion. The other case succumbed after three days' illness, and no other disease was discovered at autopsy. He did not attempt to explain the cause of the dilatation, but described the clinical history quite accurately.

The first case of dilatation due to a surgical operation that I was able to find was reported in 1887 by Dr. J. B. Hunter of New York. It followed an ovariectomy, and death occurred on the eighth day. T. R. Jessop, in 1888, in the *London Lancet*, reports a fatal case following excision of the hip; onset the thirtieth day; death in four days; dilated stomach, duodenum and six inches of jejunum found at autopsy.

Arthritis of the hip with sudden onset is assigned as cause by Kelynack in 1892, with death on fourth day. In the late nineties cases were reported by Albrecht following removal of mammary carcinoma and excision of elbow.

Fenger had a death following a cholecystectomy, and others were reported by various surgeons following operations. In 1902 Campbell Thompson was able to collect 44 cases, 12 of which followed surgical operation, 6 of which were abdominal and the remaining 6 varying from breast amputation to resection of the ankle.

In 1905 Appel collected 63 cases, 26 of which were due to trauma or surgical operations. Since this time many more cases have been reported, and the whole subject has been studied by many observers.

F. F. Simpson, in 1907, reports 80 additional cases to Thompson, 40 of which followed abdominal (including kidney) operations. Lewis A. Conner found, prior to March, 1907, 102 post-operative cases had been reported, 41 per cent. of which followed operations performed under general anesthesia; of these, 15 followed operations on the gall-bladder and bile passages, while all other abdominal operations furnish 17.

C. Jeff Miller thought, from reports at his disposal, it occurred with peculiar frequency after kidney surgery. Bloodgood has reported two cases following stomach operations (pyloroplasty and gastroduodenostomy). In almost all the cases in which the anesthetic was mentioned, chloroform had been administered. In one case ether, preceded by nitrous oxid gas, was used. In other cases (Conner) it is probable ether was used. In Halstead's case morphin-ether anesthesia was used. Finney, speaking of surgical causes, states that narcosis comes first as a cause, chloroform being the anesthetic most at fault. In experiments on dogs, Kelling showed that without anesthesia he could dilate the stomach only up to pressure of 25 c.c. of water, and at this point it was ejected, while under narcosis it could be distended up to 77 c.c. of water.

Conner found six cases complicating deformity of the spine, and Perry, Shaw and Kelling men-

* Read before the Indiana State Medical Association, Oct. 8, 1909.

tion cases following the application of plaster-of-paris jackets to correct the trouble. MacEvitt reports four cases, and says, in looking through literature, finds numbers of them; one-half of these followed operations on parts remote from the stomach, amputation of limbs, breast, ischio-rectal abscess and accidents.

We see, therefore, that acute dilatation of the stomach does occur in connection with a variety of diseases, for the most part acute infections and after narcosis, trauma and a great variety of surgical operations, the greater number being abdominal, but many followed operations on other parts of the body. The correct interpretation of facts has been quite difficult, and we cannot at present state that the pathology in all cases is understood.

The most constant post-mortem feature is the enormous dilatation of the stomach. The musculature may or may not present changes; hemorrhage into the muscular coat often occurs, and the muscular fibers may be torn apart; in other cases an unnatural thinness of the wall is found. The mucosa occasionally shows erosion. "The shape of the stomach seems characteristic. A sharp angular bend is found on the lesser curvature which converts the organ into a tight V- or U-shaped cylinder, the cardiac end extending downward and the pyloric end upward and to the right."

The pathology in some cases seems fairly clear, but in quite a large proportion we have to fall back on supposition, a very dangerous method of dealing with scientific problems. In fact, we are compelled to admit that in quite a large proportion we are unable to fully explain, in the present state of our knowledge.

Pepper and Stengal suggested that spasm of the pylorus is the cause, but post-mortem findings show that obstruction is rarely ever at this point. Conner found the duodenum reported dilated in 55 per cent. of 69 autopsies, and thinks it probable that in some a dilated state of the duodenum was overlooked. In exactly one-half of the cases in which the duodenum was found dilated, the point of the obstruction existed at the crossing of the duodenum behind the mesentery at the duodenojejunal junction.

Albrecht accepted Glenard's suggestion, that an overdistended loop of small intestine may, by traction on the mesentery, convert the mesenteric artery into a constricting band at the duodenojejunal junction, and it is also possible that an overdistended stomach, pressing the intestines downward, may create a similar constriction. Albrecht investigated on the cadaver and found that the terminal end of the duodenum is normally flat, owing to an overlying mesentery, and

that traction on the mesentery in the direction of the pelvis would cause complete obstruction of the bowel at that point.

Conner examined ten cadavers and concluded that in a certain portion of normal individuals a pull on the mesentery, approximating, in direction and force, that which might be exerted by the empty small intestines hanging in the true pelvis, can produce obstruction at the lower end of the duodenum which will require considerable force to overcome. Finney states that acute dilatation of the stomach and gastromesenteric ileus cannot be differentiated clinically. Obstruction of the lumen of the duodenum by the root of the mesentery is probably of more frequent occurrence than has been supposed. Whether this is primary or secondary to the gastric dilatation, or whether this relationship is a constant one, has not been determined. However this may be, we can be reasonably sure that more than half of the post-operative gastrectomies are due to this form of obstruction, and lavage and proper posture will give relief. This does not explain all cases, since in some the obstruction was lower down; in one case the dilatation extended eight feet below the duodenojejunal junction.

Kelling considers that, after operations on the bile ducts, obstruction may be due to pulling on the ducts or adhesions, or expanding of dry gauze packing pressing on the duodenum.

The cases which followed application of plaster-of-paris jackets were probably due to pressure or traction on the small intestine. The obstruction of the duodenum by the mesentery is also favored by anything which causes the dropping of the intestine into the pelvis, as dorsal decubitus, and especially if adhesions are formed as may occur after hysterectomy and other pelvic operations.

The absorption of toxins is considered a cause by several authors. Halstead suggests these may be the result of the anesthetic, but for the most part no attempt is made to designate the character of the toxin or its source, and, so far as I am able to determine, nothing special has been adduced to support this theory. It is, however, a plausible explanation and further study may reveal the method of elaboration and the character of these poisons. We are in the habit now of attributing to vague toxemias anything we fail to explain, just as we used to blame them on reflex irritation through the nervous system. This may, indeed, prove to be the explanation of some of these cases.

Primary paralysis is also advanced by Thompson and others, but its claims are in the same category as that of the theory of toxins. Atony

of the stomach, another scape-goat for our ignorance, has not been shown to exist. Any or all of these may be factors and they seem the most plausible explanations at hand. It is true that it occurs more frequently in septic cases, and in this a toxin may be the cause.

The symptoms may come on immediately after an injury or surgical operation, but more frequently appear the second to the fourth day, in exceptional cases after a longer interval, one as long as the thirtieth day is recorded. Vomiting is the first symptom, and at the beginning is such as we often have after anesthesia; it gradually increases in severity and the quantity ejected is large, even as much as one or three gallons in twenty-four hours. The character is like paralytic gastrorrhea, thin, yellowish or greenish aromatic material, containing hematin and bile, the latter and pancreatic fluid may be present in large quantities. The odor is offensive but not feculent.

Epigastric or umbilical pain or distress usually comes later, the bowels are constipated, but movements may occur early. The quantity of urine is much diminished. The distention of the abdomen begins in the epigastrium and extends downward, and when extreme is more to the lower abdomen and to the left, while the right hypochondriac region is flat.

The percussion note is not so tympanitic as in obstruction and is flatter in the lower abdomen. There is a distinct splash and by it the location of the greater curvature may be made out. There is great thirst and the aspect of the patient indicates grave disease. The pulse becomes rapid and weak, while the temperature may be subnormal; it is usually from 100 to 101. If the stomach tube is used, a large quantity can be siphoned off.

The diagnosis is from obstruction and peritonitis with gaseous distention. Obstruction high in the small intestine cannot always be differentiated. "Bloodgood states that in high intestinal occlusion initial pain, with peritoneal shock, which may later somewhat disappear, and vomiting without marked distention, are the symptoms which differentiate it from acute dilatation." In the latter the pain follows the vomiting, collapse is gradual and progressive and the abdominal distention begins in the epigastrium. In high intestinal obstruction he (Bloodgood) found epigastric distention a very late symptom and had not found great distention present at the operation.

Peritonitis pain and fever are the early symptoms, vomiting comes on later and the tympany

begins in the lower abdomen. The temperature is generally higher than in gastrectasis.

Prognosis is not so bad as at first supposed. The mortality is given 72 per cent. (Conner), 85 per cent. (Thompson and Appel). More recently it is much less, and with early recognition, prompt lavage and proper posture this mortality will be greatly reduced. In fatal cases death occurs usually in about 72 hours; it may occur in 11 hours, and has occurred as late as the tenth day.

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DISCUSSION.

DR. MILES F. PORTER, Fort Wayne:—It will be apparent at once, I think, to all whose attention is directed to it, that when we come to think of the various names that have been applied to the condition about which we are talking now, that we are not very well settled as to the etiology of the condition. Whether it is correct to term this condition an arteriomesenteric ileus or not is open, I think, to grave question, because this name involves a theory which, while it has been established as regards a large number of cases, has failed in at least the lesser number of cases that have been examined. It has been termed by some acute duodenal obstruction, and this again involves a theory which has not been substantiated in all cases reported upon. Whether this obstruction in the duodenum, when it is present, is due to the mesentery or not, or whether it is due to a band of fibrous tissue, extending from the left crest of the diaphragm, is also a mooted question.

Experiments have been made that seem to show, at least in a certain number of cases, that the obstruction is the result of this fibrous band of connective tissue. These experiments consisted in attempting to relieve the dilatation of the stomach without dividing this band, and this observer found that the obstruction could be relieved without dividing it, provided the stomach was lifted up from the duodenum. He therefore concluded that one of the elements in the production of the dilatation, of great importance etiologically, was the distended stomach itself. However, in one case he succeeded in relieving the dilatation by simply dividing the bundle of fibers and allowing the stomach to remain distended, and press upon the duodenum at this point, showing at least in some cases that this band is an etiological factor, and in all cases perhaps as a primary or secondary etiological factor, we have the heavy stomach. Then, again, supposing it is due to the weight of the stomach; supposing it is an arteriomesenteric obstruction; what produces this arteriomesenteric obstruction? Why does it come on in one case and not

in another, and why should the stomach be prone to dilatation with this condition of things which is supposed to obtain in all cases, physiologic as well as pathologic?

This has led to the theory referred to by Dr. Walker, of Pepper, as to the toxic origin of this condition, and it has also led to the theory that the anesthetic has something to do with it. It occurs to me that if the anesthetic has anything to do with it, then these cases should occur immediately or very soon after the administration of the anesthetic; or if they occur later after the administration of the anesthetic, then the anesthetic is only one of the causes. The anesthetic, in other words, might well be blamed for dilatation of the stomach coming on four or five days afterwards, but in order to blame it justly under these circumstances it would seem to me we could only blame it by saying the anesthetic had produced degenerative changes in the liver and kidneys, and secondarily produced toxemia, and this would lead us back again to the toxic theory. But, after all is said and done regarding the probable causes, the fact is we have a condition here to deal with which is pretty well understood. The practical point is that we have a huge dilatation of the stomach, and in the minor cases, if we can relieve this dilatation and keep it relieved, our patients get well. Another practical point is that it is possible to recognize these cases before the dilatation becomes extreme, and in proportion as they are recognized early the results of treatment are favorable, and conversely. If there is anything in the theory of the dragging of the bowel down, so as to pull this mesentery over it, it has occurred to me that careful observation of the proportion of cases that come on when the Fowler position is used, as compared with the proportion of cases in the recumbent position on the side or back, would throw some light upon this dragging on the mesentery as an etiological factor in it. It would seem to be reasonable to suppose, other things being equal, if there is anything in this theory, those in the Fowler position would give the larger percentage of dilatation. One word as to whether post-mortem findings bear out the theory of pyloric stenosis or the reverse. If this stenosis is spasmodic in character, the post-mortem findings would not bear it out. So that we should hesitate before we apply too much force to the statement that the postmortem does not bear out this theory. Another practical point, it occurs to me, along the line of treatment, is this, that the proper adjustment of an abdominal bandage would remove or have a tendency to relieve in a measure or do away in a measure with many of the accredited causes of this trouble. It prevents downward traction, holds up the stomach, and also gives a certain degree of support and therefore has a tendency to overcome the atony.

One thing regarding injections in connection with lavage in those cases in which the stomach

distention is accompanied also by a considerable degree of bowel distention. I believe the Fowler position, when we are attempting to relieve the distended bowel, is a fallacy. The water you throw in is the heaviest, and the gas is the thing you want to get rid of. The water is gotten rid of by absorption in most cases, and if you want to relieve the gas by the rectum the way to do that is to elevate the rectum. I think a practical trial of this thing will demonstrate to you all that I have said about it. I quite agree with Dr. Clark, and I do not believe, practically speaking, anybody ever introduced a tube beyond the rectum. You can get water up there, but you cannot get a soft rubber tube up there.

One other thought in connection with the treatment: We have to do here at all events with a certain degree of atony, apparently, and it occurs to me we ought to get something out of electricity in these cases that recur and recur, as they do, after they have been collapsed with the stomach tube. And in connection with that, if I had faith in drugs at all, it would be in the combined use of eserine and strychnia. I can scarcely conceive of a condition of this kind in which I could make up my mind to do a gastroenterostomy, as Mayo Robson suggests. I might be induced, in fact, I think I could be if I could get no relief otherwise, to make an opening in the stomach under local anesthesia. There would be no danger, and I think I would do that, but I could not be tempted to do a gastroenterostomy for the relief of this condition.

I think the most promising field of treatment is the early recognition of these cases. I believe that a whole lot of our cases of prolonged and excessive vomiting after surgical operations are really cases that if they went a little further would develop into what we are talking about, acute gastric dilatation, and I think if we would wash these stomachs oftener they would get over the nausea quicker and we would have fewer cases of gastric dilatation in our practice.

DR. C. S. BOND, Richmond:—As this trouble occurs from surgical interference, from toxins secondarily or primarily, I should like to ask the author of the paper if in the symptomatology, with such a large portion of the splanchnic area disturbed, hiccoughing would not be one of the symptoms. I had a case operated on a short time ago in which hiccoughing was prominent and apparently we had dilatation of the stomach and upper part of the intestine. The matter not having occurred to me before, and not being familiar with the literature, I should like to know if this is one of the symptoms.

DR. M. F. PORTER, Fort Wayne:—This condition has been artificially produced many times in the laboratory by section of the pneumogastric nerves in dogs.

DR. EDWIN WALKER, Evansville (closing):—I think one of the things to be carried home with us is that in all cases of prolonged vomiting the

stomach should be washed to prevent dilatation. I believe it occurs much more frequently than we formerly supposed; in fact, in the last few years, since understanding it, I have come across a number of cases. Lavage usually relieves. One severe case lately did not improve until the posture was changed. We laid the patient on the abdomen and elevated the foot of the bed, after which he improved. Another practical point in this connection is that for a good many years we have been accustomed to deny our patients water after operations. I think if we would allow them to drink freely, if there was any tendency to dilatation, they would vomit and wash their own stomachs, and for the last couple of years I have not restricted the amount of water. They are more comfortable and do better. As to hiccoughing, I had not noticed it being mentioned particularly as a symptom, but I think it must be a pretty constant symptom.

In regard to pyloric stenosis, Dr. Porter says we would not recognize that after death. Our knowledge of this subject has been based on the dilatation that exists, and that dilatation in more than 50 per cent. has been from the mesenteric artery up, and it is pretty safe to say that that is a cause. Now, whether that is primary or whether the weight of the stomach pushes the intestine down and thus presses on this point, is not clearly determined, but I do not think there is much doubt, from the fact that it occurs exactly at that point, and the anatomical position would favor that view.

The word atony in regard to stomach diseases is another great blanket to cover things we are at a loss to explain.

I should like to ask Dr. Clark, in closing, to explain why he gave the patient a dose of calomel? If there is anything we do not want to do it is to purge the patient, because what you have in the stomach is deeply poisonous, and I heard Mayo Robson say one of the dangers of dilatation was that you had spasm of the pylorus, and when that let go it emptied the poisonous material into the intestine and the patients went into collapse and died. Anyway, I would like to know, because I am interested in purgatives, and if there is any real good in them I should like to know what it is.

DR. E. D. CLARK, Indianapolis:—I heartily agree with Dr. Walker as to the administration of water after an anesthesia. I administer water freely after operation, as soon as the patient becomes conscious. I believe, as he does, if we let patients have it they will wash their own stomachs and stimulate things that will prevent the condition we are discussing.

In answer to the question about why I gave the cathartic, I would say that I do not believe the cathartic as I gave it would cause anything from the stomach to get into the intestine, because I gave it through the tube after the stomach was thoroughly washed, with the idea of

stimulating peristalsis and evacuating the poisonous material already in the intestines. I washed the intestine and gave the cathartic with that idea.

WHAT THE GENERAL PRACTITIONER SHOULD KNOW ABOUT MASTOID- ITIS.*

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In a consideration of the subject of mastoiditis it should be remembered that the disease is usually secondary to a suppurative process in the middle ear. Therefore, if we are to lessen the number of cases of mastoiditis requiring special treatment, we must give prompt and proper attention to every suppurative process of the middle ear. Carrying this reasoning a little further, we are warranted in giving serious attention to every persistent earache which does not promptly subside under the influence of such a simple measure as the application of heat.

Personally I am convinced that every earache, accompanied by a reddened drum membrane, which does not subside within a few hours under the application of heat, and the carbolic acid and glycerin solution for its hygroscopic and analgesic effect, is a cry for drainage. In such cases a free incision through the drum membrane, done under aseptic precautions, is a proper procedure and one that if oftener resorted to would not only very greatly lessen the severity and length of inflammatory troubles of the middle ear which we are now called upon to treat, sometimes over prolonged periods, but would also abort the majority of the mastoid and intracranial complications which come to operation or cause death of the patient for want of such attention.

It should also be remembered that in children one of the most common causes of earache and middle-ear suppuration are enlarged tonsils and adenoid tissue, and these abnormal growths should be thoroughly removed by operative procedures as one of the first steps in the proper treatment of the consequent middle-ear inflammation, as well as for improving the general health and well-being of the patient.

To recognize the danger of a suppurative process of the middle ear it is only necessary to remember that but a thin partition of bone divides the middle-ear or tympanic cavity from some of the most important structures in the body. Its inner wall is contiguous to the labyrinth; its posterior wall to the mastoid cells and often to the lateral sinus which is not infre-

quently anomalous; its anterior wall to the carotid artery; its lower wall to the jugular bulb; and its upper wall (tegmen tympani) is close to the cranial cavity. The facial nerve runs across the upper and posterior wall and is usually enclosed in a bony covering, though numerous instances are on record in which the bony covering was absent. The roof of the tympanic cavity and mastoid antrum are continuous and very thin, and lying upon it is the brain. The small channel connecting the antrum with the tympanic cavity is called the aditus, and through this channel infection usually reaches the antrum and the mastoid cells. The posterior wall of the antrum is in contact with the sigmoid sinus and cerebellum.

Pus in the tympanic cavity travels in the direction of least resistance. If the drum membrane is particularly resistant to pressure, the avenue of least resistance for the escape of secretion from the middle-ear cavity may be through the aditus to the mastoid antrum or cells, or through the tegmen tympani directly into the brain cavity. If the drum membrane is not resistant, perforation occurs, but sometimes not until after the infection has already been forced into the epitympanic space and through the aditus into the antrum and thence into the mastoid cells. The infection may and often does get into the mastoid antrum and cells after perforation. In fact, it is supposed that the mastoid antrum nearly always partakes of the inflammatory and septic process which affects the tympanic cavity, and we separate the two affections only when there are focal manifestations in the mastoid region. The mastoid cells which drain into the antrum become affected through denudation of the ciliated epithelium, and the consequent interference with drainage, thus permitting infection to extend to the deeper parts, with consequent caries and necrosis. This necrosis may extend through the roof of the antrum and expose the dura to the infection, or by going through the posterior wall or floor involve the sigmoid sinus or cerebellum.

It is safe to assume that it is chiefly in those cases in which free drainage is interfered with that the mastoid symptoms become manifest. These symptoms are chiefly those of pressure from retention of the secretions within the cells. They are pain, redness, swelling, and tenderness upon pressure or percussion over the mastoid process. There is usually a sudden rise of temperature, and sometimes chills or chilly sensations. The temperature may reach 104, though some cases may have only a slight elevation of temperature. I recall one case of several years ago, operated three weeks after the development

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of mild mastoid symptoms, in which the temperature never went above $99\frac{1}{2}$, and the principal symptoms were slight mastoid tenderness, a moderate amount of dull mastoid pain, and persistent redness of the superior and posterior wall of the external auditory canal. The drum membrane had been freely incised at the onset of middle-ear involvement, and the patient had been confined to bed from that time. A high leucocyte count was considered in arriving at a decision to open the mastoid. On operation I found the mastoid cells broken down, the posterior wall of the antrum perforated from necrosis, and an epidural abscess present.

The skin over the mastoid may or may not be red and swollen. In some cases the auricle stands forward, due to a subperiosteal abscess. This is quite apt to be the case in children, owing to the softness of the bones and the ease of perforation outward. This, however, should not be considered evidence that the abscess has burrowed through the cortex, and with free incision and drainage a cure will be effected. Oftentimes the necrotic process has also extended backward, or in other directions, involving the structures within the cranial cavity and threatening the life of the patient. Thousands of children have lost their lives from brain abscess, various forms of meningitis, pyemia and other infective processes, all properly diagnosed, but with little or no suspicion that the initial cause was a middle ear and mastoid suppuration, or if the cause was recognized, the discovery came too late to be of assistance in bringing about appropriate treatment.

A sign of much diagnostic importance in mastoiditis is the redness and swelling of the post-superior wall of the meatus close to the drum membrane. This sign is significant of a destructive type of inflammation, and by nearly all competent observers is considered an imperative indication for operation. Delay in operating subjects the patient to almost certain danger.

There is nearly always a perforation of the drum membrane, though I have operated several well-advanced cases of mastoiditis and found extensive destruction when the drum membrane was intact previous to the operation. A case of that description has recently been operated, the patient giving a history of mastoid symptoms which even antedated the middle-ear symptoms. The infection had seemingly passed from the Eustachian canal directly through the middle ear and on into the mastoid without producing subjective symptoms of middle-ear involvement.

The discharge from the ear may be scanty or profuse. If an ear that is discharging freely suddenly ceases to discharge, or discharges

scantly, the change should be looked upon with suspicion, and particularly if there is an attending elevation of temperature. Improvement may occur as a result of wide incision of the drum membrane to increase drainage, but usually it will be found that the symptom indicates a destructive involvement of the mastoid which nothing short of an operation will relieve.

Continuous earache after a discharge has set in is always of serious omen, and means that sooner or later mastoid or intracranial symptoms will develop. Excruciating headache, worse at night, in connection with a discharging ear, suggests meningitis. The pulse will also be inordinately high. A slow pulse, with pain, suggests brain abscess, and especially when accompanied by vomiting and vertigo. Severe chills mean septic infection, and the so-called "steple chart temperature," in which the temperature suddenly shoots up to 105, 106 or even 107, and as suddenly drops to normal or subnormal, accompanied by a chill, only to rise again, is considered pathognomonic of thrombus of one of the large venous channels in the vicinity of the ear. More often the thrombus will be found in the sigmoid sinus or jugular bulb. Delirium, coma and paralysis are always important danger signals.

As an evidence of the rapidity with which infection from a middle-ear inflammation may extend to the intracranial contents, I desire to report a case operated a little over two weeks ago. The patient, a healthy and robust school girl, living near Garrett, Ind., had her first earache on Wednesday while in school, followed in a few hours by free discharge from the ear. On the following day (Thursday) she developed pain and tenderness in the mastoid region, but not of severe character. On the following morning (Friday) the mastoid tenderness became very marked, and at the same time the temperature rose, and when first seen that morning by Dr. Klingler, the family physician, it was 104.4. I was called by telephone early in the afternoon, and after hearing the history of the case, recommended that the patient be taken from her home in the country to the hospital at Garrett. When I saw the patient a few hours later the temperature was 104.5, and she was delirious. Ear discharging freely. Mastoid tender, but not red or swollen. On operation extensive destruction of the mastoid cells was found, together with necrosis of the posterior wall of the antrum, under which was a collection of pus lying on the dura. The sigmoid sinus was uncovered for about one inch, and though I did not like the color of the sinus wall, I could not diagnose a thrombus and considered it hazardous to open the sinus in the face of what seemed to be only a periphlebitis.

Furthermore, there had been no chill or remissions in temperature, and it was thought that the mastoiditis and epidural abscess were sufficient to account for the alarming symptoms. Following the operation the temperature went down to practically normal, but inside of twelve hours it jumped to 105.5. It then fell to 100, only to rise again to 106. There was no chill. Within forty-eight hours of the first operation I again operated, freely exposing the sigmoid sinus and opening it widely. I found a thrombus extending from the knee of the sinus to the jugular bulb. With a curette the thrombus was carefully curetted from both above and below. The wound was packed with iodoform gauze and the patient put in bed within thirty minutes from the time she went on the table. The temperature dropped to 102 within an hour, and has not gone above that since, and this is the eighteenth day since the last operation. This was one of those fulminant cases, occasionally seen, which demand immediate and heroic attention. (Patient died of meningitis a few weeks later.)

A similar case, with fatal results, came under my observation less than four weeks ago. The patient, a healthy girl, 10 years of age, residing ten miles from Antwerp, Ohio, came home from school with a severe earache. The parents quieted the pain by the internal administration of paregoric. The ear began to discharge a week later, and two days from that time the family physician, Dr. G. M. Brattain of Antwerp, was called to see the patient on account of high fever. At that time the mastoid was found very tender, but not red or swollen. The patient was brought to my office on the following day, when an examination disclosed pronounced tenderness of the mastoid extending down the jugular. No external redness or swelling, but marked redness and swelling of the postsuperior wall of the external meatus next to the drum membrane. Discharge from the ear very scanty. Patient had a temperature of 104, pale and anxious expression, rapid and painful respirations, and rapid pulse. Parents stated that patient suffered from a slight chill that morning. Patient was sent to the hospital for more extended examination. Dr. B. Van Sweringen, who examined the lungs, confirmed the suspicion that the patient was suffering from a pneumonia which I had concluded was pyemic and probably due to infection from a broken down thrombus of the sigmoid sinus. Operation was discouraged and patient was taken home that night. She died two weeks later from general pyemia, and I learn from the attending physician that, in addition to the pyemic pneumonia, the patient had multiple abscesses in

various parts of the body resulting from septic thrombi which very evidently came from the initial thrombus in one of the large venous channels in the region of the mastoid, more probably the sigmoid. It is quite probable that had the patient received prompt and proper surgical treatment early in the history of the disease she would be alive to-day. As it was, she suffered from a fatal, though preventable, illness when first seen by the family physician. The case also points to the folly of giving any form of opium to relieve an earache, as it gives a sense of false security while a dangerous septic process is at work. An earache which heat, carbolic-glycerin solution and perhaps a quick acting cathartic will not relieve is a demand for drainage. The pent-up secretion in the middle-ear cavity, often of a violently infective type, must escape, and it not infrequently happens that it escapes by forcing its way into the cranial cavity with perhaps rapidly fatal results.¹

Even the discharging ear is an element of danger as long as it discharges, for every middle-ear suppuration has in it the potential possibilities of serious complications, and accordingly the injunction not to look lightly upon a discharging ear, whether acute or chronic, is not out of place. A celebrated otologist, now deceased, has said that "a discharging ear is like a charge of dynamite which may explode at any minute," and the comparison is not altogether a bad one.

The treatment of an acute mastoiditis is essentially surgical. If seen before spontaneous perforation of the ear drum has occurred, the drum membrane should be freely incised at the point of greatest bulging. This increases drainage, relieves pressure and the consequent tissue necrosis. It is even advisable to enlarge an already existing opening in the drum membrane for similar purposes.

1. Very recently (February 6, 1910) the writer was called by Dr. L. P. Drayer to see a man who had just been admitted to Hope hospital in an unconscious condition. Dr. Drayer had seen the case for the first time but an hour before, and had obtained no other history than that the man had been suffering with an earache for a period of two weeks. Soon after admission to the hospital the patient had a chill, followed by a rise of temperature to 104.° An examination disclosed a reddened and bulging drum membrane on the left side but no perforation. The post-superior wall was reddened and this gave the only determinable indication of mastoid involvement. I freely incised the drum membrane, giving vent to a purulent secretion. Permission was not obtained for further operative procedures. Twelve hours later the patient developed a facial paralysis on the left side and eighteen hours after admission to the hospital he died without having regained consciousness. Upon autopsy we found an infected thrombus in the sigmoid sinus which had resulted in a general purulent meningitis. The sinus had become infected from the mastoid and all of the complications with fatal termination could be traced to the acute middle ear inflammation. This case is only one of several occurring in the writer's experience in which autopsy has definitely shown that death was due to an intracranial complication resulting directly from extension of the septic process from the middle ear, and any one of which could probably have been saved by early and proper operative attention.

If the mastoid symptoms have not existed longer than twenty-four hours, an ice pack over the mastoid may reduce the inflammatory reaction, diminish the swelling of the mucous membrane and thus overcome the obstruction to the flow of the secretions. If applied after thirty-six hours the ice pack has little or no effect, as necrotic processes in the membrane have become established. If the ice pack does not remove the tenderness and pain and establish a free discharge of secretions it had better be discontinued. Even relief from the acute symptoms cannot be looked upon favorably if the discharge continues and becomes a chronic discharging ear. Such cases should always be looked upon with suspicion, for sooner or later they will give trouble, and usually the first note of warning will be a grave intracranial lesion due to extension of a slow and insidious necrosis of the wall of the antrum or cells.

Successful treatment of an acute mastoiditis is not only that treatment which relieves the patient of pain, redness, tenderness and fever, but also eradicates the infection. In the majority of the cases nothing short of an operation accomplishes the purpose, and the earlier it is performed the better. Occasionally a case of mastoiditis with pus in the antrum and cells recovers without operation, as a result of perforation of the bone externally, thus giving drainage and in due course of time the cessation of discharge and closure of the fistulous opening. But this is the exception, and no physician or patient is warranted in advising or taking such a serious risk with a view of securing a favorable outcome. A mastoid abscess extends inwardly more often than outwardly, and with chances so overwhelmingly in favor of serious intracranial involvement as a complication of mastoiditis, it becomes nothing short of foolhardy to depend upon Nature to deal favorably with a condition that so often results in a fatal termination.

The simple mastoid operation is not a serious matter, but the mastoid operation which includes removal of extensive areas of necrosis and perhaps exposure of the intracranial contents becomes a serious affair. A delay of a few days or a few weeks or months may mean the necessity for a serious operation instead of one that is not so radical. Cold applications, incision of the ear drum and leeching should be tried early and persisted in only with indications that they are aborting the trouble. If pain and tenderness persist after twenty-four hours of such treatment, then the indications are that nothing short of an operation will produce satisfactory results. Many

cases of chronic suppuration of the middle ear exist purely as a result of failure to treat the acute trouble properly, and those cases are likely to give serious trouble later. Operation in acute mastoiditis is not, therefore, to avert immediate danger alone, but also to prevent future trouble. Chronic otorrhea is a menace to the patient's life, and every effort should be made to cure it. The largest life insurance companies recognize the danger and refuse to insure the life of any person suffering from a chronic otorrhea.

Chronic mastoiditis is not characterized by any special symptom other than those present in chronic suppuration of the middle ear. Mastoid pain and tenderness are often absent, and there is seldom any fever unless there should occur an acute exacerbation, when the symptoms of an acute mastoiditis may be present. Intracranial complications, as sinus thrombosis, meningitis, brain abscess, etc., may be the first focal symptoms to develop.

These cases usually have a foul-smelling discharge from the ear, with loss of drum membrane, necrosis of ossicles and presence of polyps or granulation tissue in the middle ear. A chronic discharge from the ear continuing over a period of two or three years is almost invariably attended with necrosis, and a persistent purulent discharge which continues after thorough and careful treatment of a few weeks is a fairly good evidence of chronic mastoiditis.

One of the most prominent physicians of Fort Wayne, who died about two years ago, had a chronic discharge from one ear for a period of twenty-five years. I attended him during his last illness and urged him to submit to an operation for an intracranial involvement which had been diagnosed. He would not consent. After his death I secured an autopsy and found a large abscess, of long standing, in the temporo-sphenoidal lobe, and there was a fistulous opening leading from it directly through the tegmen tympani and into the middle-ear cavity. He lost his life from an affection which might have been prevented. Many other people have died from the indirect effects of a discharging ear without it being suspected that chronic otorrhea was the cause of the fatal complication.

To answer the query suggested by the title assigned me for this paper I will say that every general physician should consider a persistent earache as significant and not pass it over with a prescription for a local application of laudanum and sweet oil, or, what is worse, a prescription for an opiate to be taken internally. The pain from a middle-ear or mastoid inflammation should

never be quieted with any form of opium, as by so doing the symptoms are masked. Treat the cause of the pain, which in all cases is pent-up secretions and infection. Establish free drainage through the drum membrane first. A free incision of the drum membrane, done under proper aseptic precautions, is comparatively harmless and at once opens an avenue for the escape of infectious material which for the want of an opening may be extended into the antrum or the brain cavity, because that direction may be the one of least resistance. With the establishment of free drainage the severe pain should cease. If pain persists you have something more serious than a simple middle-ear trouble to deal with. An acute suppuration of the middle ear, if it is progressing toward a cure, will subside gradually. If a profuse discharge stops suddenly, then look out for mastoid or intracranial complications, and especially if at the same time the temperature jumps upward. If mastoid symptoms develop, as evidenced by pain, tenderness, redness or swelling of the mastoid, apply cold to the mastoid at once, but do not persist in the use of cold if it does not produce a decided relief of all symptoms within a few hours, and do not try it at all if the mastoid symptoms have existed for thirty-six hours, but have the case operated.

If in the course of suppuration from the ear the patient has a chill, followed by high fever, and sudden and radical fluctuations in the temperature, suspect sepsis in some of the venous channels, usually a thrombus of the sigmoid sinus, and urge immediate operation. You will have a funeral if the case is not operated, and you may have one anyway, but an operation offers the only hope.

Finally, remember that every middle-ear suppuration has elements of danger in it, and it should be given careful attention; that mastoid or intracranial complications and the indications for an operation therefor are clearly marked; and that 75 per cent. of the deaths as a direct result of extension of a suppuration from the middle ear can be prevented by early and proper operative procedures.

The general practitioner can improve the mortality and morbidity rate if he will recognize the importance of giving suppurations of the middle ear more attention and make more and earlier diagnoses. If he cannot diagnose and cannot operate his cases, and he is seldom capable of doing the latter, he owes it to himself and to his patient to call to his aid some one who can do it.

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TREATMENT OF PANCREATITIS.*

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In writing this review of treatment, I beg to disclaim any extensive personal knowledge of the subject, but have drawn at liberty from available essays and reports. The teaching, and in some instances the language, is that of our best authorities. Inflammation of the pancreas stands in such relation to disease of the gall-bladder and ducts, that no study of the surgical treatment of pancreatitis can be made apart from these anatomical, pathological and mechanical relations.

When we recall that the common duct runs through and is surrounded by the head of the pancreas, and cannot be separated from it except by dissection in a large majority of cases instead of merely traversing a groove upon its surface; and when we also remember the termination of the common duct and the pancreatic duct side by side in the ampulla of Vater in the duodenum "forming a common cavity within the papilla," we can understand at once how the pathology of one may readily be associated with the pathology of the other, and how the surgery of pancreatitis comes to us as a development of gall-bladder surgery.

As surgeons in their work upon the gall-bladder and ducts became more expert, painstaking and thorough, it was learned that certain conditions of the pancreas complicated the pathology and modified the results. It was learned that inflammations of the pancreas, whether arising on account of duodenitis or conveyed to it through lymphatic or other channels, produced symptoms very similar to gall-stone attacks; and, on the other hand, we have positive knowledge that gall-stones in the common duct, or the pathologic effects of their passing through the duct, are the most common cause of most of the cases of pancreatic inflammation.

The workers in this field of surgery have been many, and their contributions to the literature of the subject so comprehensive that we are now able to collect sufficient evidence to establish a symptomatology so marked as to render a diagnosis of pancreatitis reasonably certain in many cases. On the other hand, it is not possible, in an organ so deeply placed as to render palpation practically impossible, and connected with duodenum, liver, stomach and gall-ducts, by circulatory, lymphatic and nervous chains, to ever accurately estimate its pathologic changes, except by means of the exploratory incision. So I sub-

* Read before the Indiana State Medical Association, Oct. 8, 1909.

mit that the treatment of pancreatitis, to be at all certain or rational, must be surgical.

Pancreatitis presents itself in three forms with varying intensity, modifications, and terminations in individual instances. These are the acute, subacute and chronic.

Of the acute fulminating hemorrhagic form of pancreatitis, 90 per cent. of unoperated cases die after a very brief and terrible illness. This form of pancreatitis cannot be differentiated from perforation of gall-bladder, of duodenum, or of stomach; or from acute intestinal obstruction. It has been confounded with renal colic, extra-uterine pregnancy and appendicitis. The terrific sudden pain in the right upper abdomen, the shock, collapse, nausea, vomiting, rigid muscles and the rapidly increasing tympanites make a clear indication for immediate operative interference, no matter what the cause. The blood-stained serum and fat necrosis will at once establish the diagnosis. The exudate is to be removed as rapidly as possible and the abdomen irrigated with salt solution. The gastrocolic omentum is then opened and the pancreas exposed. Gauze drains in rubber tissue are secured in place by catgut stitch and the operation completed as quickly as possible. If the advice is correct to go in quickly, it is certainly imperative to get out as rapidly as possible.

Some surgeons advise incisions into the pancreatic substance, while others do not, but all agree on thorough irrigation and making free and ready exit for the inflammatory exudate which is extremely toxic. For it has been shown that the critical condition of these patients is due to trypsin intoxication, and the intensity of the symptoms depends on the amount of necrosis and pancreatic gland involved. Under this plan of early operation, irrigation, cleansing and free drainage, surgeons can show a mortality of 50 per cent., as against 90 per cent. without operation. Of the causes of the fulminating hemorrhagic type, *one* we know positively, and that is gall-stone in the diverticulum of Vater and bile forced into the pancreatic duct. Patients may die in forty-eight hours of this disease, and a study of it enables us to understand why a patient who has passed through so many attacks of gall-stone colic, dies at last in one of them.

In the subacute form of pancreatitis, the onset may be just as sudden perhaps, but the symptoms lack the severity, the intensity of those of the acute fulminating type. Pain may persist. Jaundice develops. A tumor may or may not present itself. The symptoms may be identical with those of gastroduodenitis, and catarrhal jaundice is known in many instances to be neither more

nor less than pancreatitis with the head of the swollen pancreas compressing the choledochus.

Most of the cases of this form of pancreatitis will recover under simple cholecystostomy, which provides an outlet for the bile until the swelling of the pancreas subsides sufficiently to permit the common duct to again become open. In many instances localized abscess in the head of the pancreas or surrounding tissues will have to be opened and drained. Collections of serum in the peritoneal cavity or behind it, not necessarily purulent, must be cleaned and drained. Fat necrosis to a marked degree is not incompatible with recovery, provided free drainage is afforded to the toxic products of inflammation.

The treatment, then, of the subacute type is drainage, always of the gall-bladder and supplemented by drainage of the subhepatic and pancreatic areas when required.

In cases of chronic pancreatic inflammation, there is great infiltration and enlargement of the head of the pancreas. Hyperplasia, especially of connective tissue, develops. Deposits of exudate become organized into adhesions about the duodenum and gall-ducts so that in many instances the common duct seems to run into a solid tumor.

Such a condition has often been mistaken for malignant disease, even by the most experienced surgeons. Under such condition the common duct passing directly through and surrounded by this mass, becomes compressed, and can no longer serve its purpose of carrying bile into the intestines.

The problem of treatment merely resolves itself into making either a temporary outlet for the bile by means of drainage through the gall-bladder, or a permanent new channel for the bile by uniting the gall-bladder to some other portion of the alimentary canal. Speaking first of those cases that can be cured by a temporary outlet, we must recall again that over one-half, some say 60, some say 80 per cent., of these cases have been caused by gall-stones.

Gall-stones in the gall-bladder and cystic duct will be found to have coincident pancreatitis in 7 or 8 per cent. of cases; and gall-stones in the common duct will have pancreatitis in 22 per cent. of cases. These gall-stones caused by and attended with infected bile, as they always are, give rise to the irritation that produces the plastic inflammation in the pancreas and removing this cause will effect a cure. In nearly all the cases in which stones are found in the bile tract, the successful removal of these stones and temporary free drainage of the gall-bladder can be depended upon to cure chronic pancreatitis, just

as the same procedure will suffice to effect a cure in almost every case of the subacute form.

Taking up now the class of cases in which temporary drainage of the gall-tract will not do. Here we have permanent obstruction of the common duct. It is either permanently compressed from without by permanent over-growth or infiltration of the gland substance about it; or what very often has happened, is that the duct is stenosed by injury to its mucous lining from gall-stones that have escaped into the intestine. In this class of cases the gall-bladder and duct will be found enlarged and dilated from long-continued back pressure of bile, and this bile must be turned into the intestine by uniting the gall-bladder to some other portion of the alimentary canal by means of the well-known procedure of making a cholecystenterostomy. The gall-bladder has thus been successfully united to the alimentary canal, and the procedure gives nearly 80 per cent. of cures in a condition which must otherwise be inevitably fatal. The points at which union has been made have been four, namely, to the stomach, to the duodenum, to the jejunum and to the colon.

The relative merits of these different procedures will not be taken up here for discussion, but this brief review will serve to show how the profession can attack successfully both the acute and chronic forms of inflammation of this most deeply hidden of all the organs of the body.

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DISCUSSION.

DR. T. VICTOR KEENE, Indianapolis:—Since my arrival in Terre Haute I have been asked to substitute for Dr. McCaskey, who is not able to be present. What I shall have to say on the subject will be based upon my experience with one case of pancreatitis, and the knowledge gained by studying the literature on the subject.

There are three great digestive stations within the human body. The first is the mouth, with the saliva as its digestive element to take care of the starches and sugars. The second is the stomach, whose function in a broad way is to take care of the proteids and sugars. The third and last of the digestive stations is the duodenum, with the pancreatic fluid as its medium. The pancreatic fluid has for its function to take care of such proteid and sugar as is undigested in the stomach and the fat in the food. The first effort at digestion and assimilation of the fat is made in the duodenum by the pancreatic fluid. Now,

obviously a perversion of the character or a lack of pancreatic fluid would immediately and naturally lead to serious metabolic disorders, because if we have complete lack of pancreatic fluid or a change in its character we will have a lessened or total lack of fat absorption and digestion. Now, the body as a matter of fact, possesses a very limited capacity, irrespective of the pancreatic fluid, to take care of fats, so that the total lack of pancreatic fluid as we frequently get it in a pancreatitis does not produce such serious metabolic disorder as would first appear likely.

The recognition of pancreatitis as a separate and distinct entity is a matter of recent years. It is well within the memory of many of the men here when we had an ill-defined disorder known as abdominal pain, popularly called bellyache. We have finally seen this diagnosed as a symptom of appendicitis and various other diseases. The latest distinct differentiation is the so-called pancreatitis. As a matter of fact, the first time we read of it in the literature, at least in a prominent way, was in 1900, which is, of course, within relatively recent times. Now, pancreatitis, as the name would readily indicate, is an inflammation of the pancreatic gland. The term is rather a misnomer, for we do not have in all cases a pancreatitis, the classical pathologic picture of inflammation of tissue. The disease is a disease of perverted activity of the glands rather than an anatomical physical inflammation of it.

Pancreatitis as a disease is a thing of very recent recognition. The reasons are many, the most prominent of which is that the pancreatic gland is the most prone of all the tissues within the human body to decompose after death; in fact, the gland is the most difficult of all the glandular structures to get in the various laboratories which use it in a teaching way. The proneness of the pancreatic gland to degenerate is a thing which is commercially recognized in a very practical way. The records of the post-mortem room would seemingly indicate that inflammation of the pancreas is a very rare disorder. However, for the reason just mentioned, the records are very likely to be untrustworthy, because any examinations made would not indicate the condition of the gland in life, but the condition in life plus post-mortem degeneration. The record of the operating room, however, would indicate that inflammation of the pancreatic gland is a much more common disease than is indicated by the record of the post-mortem room. In fact, we have various statistics offered from the well-known statement of Mayo Robson, of England, a prominent worker in this line, who has found that 60 per cent. of cases of gall-bladder lesions have inflammation of the pancreatic gland, to the records of Oser, of Vienna, who states that about 20 per cent. of his cases of inflammation of the gall-bladder of various types show an

associated inflammation of the pancreatic gland. The fact of the matter is, a great many men seriously question whether there is such a thing as primary suppuration and distinct inflammation of the pancreatic gland, holding that it is secondary to other disorders. That is a matter that cannot be determined yet. The condition has been studied and post-mortem records have been collected in many cases, so that we now describe a certain clinical order of infections which we term pancreatitis.

As a general rule, there are two main types of pancreatic disease. The one is the so-called atrophic pancreatitis and the other the so-called inflammatory type. The atrophic form is a disease in which we have an individual develop up to a certain period of years, seven or nine, in a normal manner. Then the physiological activity of the gland is incompetent to supply the needs of the body, and the individual remains in *statu quo*. He remains a 7 or 8 or 10-year-old individual indefinitely. This is simply due to a lack of development. That is the so-called pancreatic infantilism that has been described primarily by Oser, of Vienna, and is a disease of the same general type as cretinism and the other glandular inactivities. This disease has certain symptoms which cause it to be suspected and diagnosed. The first and most prominent symptom is the marked tendency toward arrest of development. The individual develops to a certain stage and develops no further. The mental and physical condition remains the same. It does not go back or does not progress. There are cases in which this arrest does not occur until 16 or 17. There are very few digestive disturbances in this disorder. The patient eats heartily. He has a marked tendency to bloating, because he prefers and elects in his diet fruits and foods which are largely composed of sugars, and possibly albumins. The pictures that appear in the literature of this type of cases remind you of the pictures you see of negro children in Central Africa, who are largely belly, the reason being when any individual develops the carbohydrate habit of life they have a tendency toward gaseous bloating and physiologically and anatomically a sugar eater must have a longer intestinal canal to admit of absorption than a meat eater has. The most common symptom present in the greatest number of cases is a tendency toward frequent movements of the bowel. This is in no sense of the word a diarrhea. There is no griping. The stools are not watery. They are hardly formed, but they are rather solid and soft. It is remarked by all writers on the subject that the stools of this type of cases are peculiar, in that the amount excreted seems to be larger in bulk and greater in amount than the intake of food, the reason being ascribed to the tendency to gas production. Such cases, of course, are strictly and purely medical cases.

The treatment is capable of being administered anywhere by the profession. It consists in the administration of fresh pancreatic gland. For some reason unknown, the gland of the pig seems to be preferable, and it is simply macerated and extracted in glycerin, using two volumes of glycerin to one volume of gland, and such a digestive medium remains in good order from four to six weeks. The dosage of it is usually about three or four teaspoonfuls every four hours. Such a patient will rapidly progress; he will put on weight and develop mentally and physically. The literature is not particularly rich in this type of cases. Every text-book mentions this type prominently, but there are only about 40 cases listed in Robson's new book, and these include the complete series of cases in all the literature.

When we say pancreatitis we mean more commonly the type which is an acute disorder of the gland. The etiology of pancreatitis is unknown. There are various theories offered, and as usual in such cases, none or very few are of value. It is the old principle, when you open a text-book and find fifty or sixty drugs of great value in a condition, none of them is of much value. The idea which appeals most strongly is that the acute disorder is occasioned by inability of the pancreatic gland to eliminate its secretions, or the walling back and damming of the bile salts from the intestines. The experimental data on which this is based are as follows: In a great many cases of acute pancreatitis we find the pancreatic gland stained with bile salts. It is well known from the classic experiments of Flexner, of the Rockefeller Institute, that we can take bile salts and dilute hydrochloric acid or dilute sulphuric acid, etc., and inject it into a gland of a dog and produce symptoms of pancreatitis. That is really the only fact that we have on which to hang our theory that pancreatitis is produced by a retention of the secretions, or by an intaking of the contents of the intestinal tract. Certain it is, however, that in many cases of pancreatitis we have the duct occluded by a stone in the common duct, or you will find the pancreatic duct pressed shut by a surrounding tumor.

The symptoms of this disease will be briefly recounted. It was my good fortune to see one case of what was unquestionably pancreatitis, a case referred to Rilus Eastman by Dr. Pearson, of Wabash. The case was sent in without a diagnosis, as there was such a rapid enlargement of the belly that physical palpation of the abdomen was out of question. The diagnosis was made, as will be related. Pancreatitis is extremely and most extraordinarily abrupt in its onset. Some patients have reported that they felt as if they were kicked in the pit of the stomach by a mule. This acuteness is common and very generally reported, and the pain radiates to the left scapula. This rotation to the left is significant as well as interesting. We know that in a large

majority of gall-stone cases the pain is radiated to the right scapula. This differentiation may be rather far-fetched, but it is dwelt on prominently in all the texts. The patients immediately after they have the acute onset and the extreme pain develop a tumor which can usually be palpated posterior to the stomach and anterior to the spinal column. This tumor mass is usually rapid in development, so much so that three or four hours make a marked difference in the size of the tumor. Obviously, the great difficulty in arriving at a diagnosis of acute pancreatitis is to differentiate it, as the symptoms have been developed so far, from gall-stone disease. This is practically impossible to do absolutely, although there are suggestive tests. The nausea and vomiting you get in pancreatitis are the most prominent symptoms, and it amounts to what is practically projectile vomiting, very annoying and very continuous. This is present in every case I have seen reported in the literature. There are a number of cases reported that have been operated on under a diagnosis of intestinal obstruction, and when the abdomen was opened the only disorder found was that of the pancreas.

In the one case I saw the diagnosis was arrived at in this manner: The condition was suspected, of course, but there was such an acute peritonitis that we could not palpate the abdomen. The bowel movements were very frequent and there was no diarrhea. It was noted by the nurse that in one of the bowel movements there seemed to float an oil on the top of the water in the bed pan. That at once gave a good suspicion of acute pancreatitis, and a study of the literature showed that that was a rather common means of arriving at a conclusion. The urine was tested by the Cammidge reaction. The principle of this reaction is to find present in the urine a pentose which is not normally present in any other condition in the quantity we find it in this disease. It would not be proper to consider the technic of that here. But this reaction has been accepted very generally as at least highly significant of the possibility of pancreatitis.

The treatment of this type of pancreatitis is entirely surgical. I think that all cases of acute pancreatitis should at least be accorded the courtesy of competent surgical operation. It is a surgical disorder. However, the after-treatment of it is largely medical, and medical treatment has one idea in mind, and that is the withholding of fats from the patient as much as we can, giving fats only in the form of milk, in which form some of it will be absorbed, but the fats of meats and butter should be withheld, as they may distress the patient and do him no good.

DR. THOMAS B. NOBLE, Indianapolis:—When it is remembered that the pancreas is provided with more protection than any other organ in the body, that, roughly speaking, it lies in front of the immense barrier of bone and muscle in

the rear, that it lies under the eaves of the costal border above, that it is protected in front by the abdominal wall and the abdominal viscera, we have every reason to believe that Nature looks upon this organ as certainly sensitive, delicate and easy of insult. Such is observed clinically.

I only want to talk relative to the surgical aspect of this condition. The clinical features of pancreatitis one sees in a class commonly dominated by abdominal surgery. There is a reason for the clinical conditions we find here, a reason first in the anatomic structure and relationship of this gland, particularly to the liver, with which it seems to be closely associated in function, at least. In operative function the pancreas and its perijacent lymphatics and lymph nodes are continuous with the lymphatics and lymph nodes of the liver, as shown by Cuneo particularly. The pancreas is connected with the liver in direct channel route in quite a number of cases, as shown by the dissections of Mayo Robson. Some of these pancreases have a double outlet. You all remember the duct of Wirsung, and there is a superimposed duct in quite a percentage of these organs which has an independent auxiliary outlet through the channel of Santorini. The openings of these ducts are not at all constant. Sometimes the duct of Wirsung has a common opening with the common gall-duct at the papilla and opens as a crescentic auxiliary opening to the major opening of the common bile duct. It seems to be of lesser significance in that the major characters of the structures are devoted to the provisions for the biliary outlet, while that from the pancreas seemingly is of less importance, of more delicate structure and of more indifferent association and relationship, as evidenced by its elliptical opening. The opening of the bile duct will remain patulous longer than that of the pancreas. This pancreatic opening is sometimes directly in the ampulla of Vater, superimposed above the common duct or the papillary opening. It sometimes happens that the duct of Santorini opens in the common duct a considerable way above the common opening below, so that a closure at the papilla will allow a direct communication by a channel route from the biliary passage through the duct of Santorini directly into the substance of the pancreas. So much, then, for the anatomic relationship.

We observe, then, that the pancreas is subject to insult from two routes—one directly through the discharge of the bile, and another indirectly through the lymphatic channels. It has been noted that the gall-ducts and the gall-bladder are very commonly disordered, gall-stones very frequent and are a very common cause of mechanical disturbance, as well as zymotic disturbance of these organs. We find that it is no more than a natural and logical sequence in biliary disease and cholelithiasis to find pancreatitis or pancreatic insult.

In my observation, and I believe it thoroughly corresponds with the observation of others, we can have two varieties of pancreatic symptomatology. If it be due to a mechanical cause, as by a stone or otherwise, whereby bile enters the substance of the pancreas, then we have a terrific violent reaction manifested largely as described by Dr. Sexton. These cases are particularly liable to shock. The other variety is of more insidious onset, much less heroic and desperate in its character, and it is that which results from an infection through the lymphatics. These two routes of infection or insult develop these two different types, and they correspond largely to my own experience in this line of cases. I have had, of course, and I think most men have had, but few cases, taken as a whole. I have had but three cases that come in this category. Two of them were due to the sudden injection of bile into the pancreatic substance, and a terrific virulent destructive insult followed, whereby a hemorrhagic exudation occurred in the substance of the pancreas, producing tumor formation. Both these cases were sequential to cholelithiasis. Neither of these cases, however, presented shock and collapse demanding immediate intervention. One of these cases developed a pancreatic tumor that had been in existence three weeks. Another had been in existence for four months, an enormous fluctuating tumor, not at all painful nor sensitive, in the abdomen of a doctor in our city.

This case had been variously diagnosed. He was in *extremis*. Because of a diagnosis of inoperable carcinoma made by a doctor in Cleveland, confirmed by another in Chicago, he had given himself up to die, and so the condition ran on and it had existed for three months, and this enormous accumulation and distention had occurred. I evacuated that sac under local anesthesia and got therefrom a gallon and a half of thick dirty fluid. That man improved after this evacuation and was taking nourishment several weeks thereafter, and then suddenly died from acute hemorrhage in the sac that had not yet collapsed and healed. Another case, similar in character, died in acute mania, eight days after the evacuation of a hemorrhagic cyst.

A third case in a woman in middle life treated for three weeks under the notion that it was typhoid, developed a palpable, sensitive tumor under the right costal border, which was considered to be a distended, inflamed gall-bladder. An operation revealed in this instance an empyema of the gall-bladder, with pericystitis and large gall-stones in the bladder, but none in the ducts, pancreatitis and very extensive fat necrosis in the upper border of the stomach and in the omentum. This was a rather fleshy woman. I removed the gall-bladder, dilated the cystic duct, introduced a split tube into the common and hepatic ducts, and established drainage, and though this woman continued to have a slight degree of fever for

a week, with more or less gastric sensitiveness and tenderness, she made a very good and a permanent recovery, and is in perfect health to-day, and it has been three years since the operation was performed.

DR. C. S. BOND, Richmond:—In the discussion of these papers the names of Drs. Opie and Welch, who some three or four years ago gave this matter very careful attention, have not been mentioned. I consider them among our best observers, and they reached some very definite conclusions by ligating the common ducts in dogs and creating an artificial pancreatitis. Their observations are well worthy of attention, and are exceedingly valuable on the subject under discussion. I think it is agreed that the blocking of the common duct by stone or otherwise is the cause of acute pancreatitis from the damming back of the gall into the pancreas, thus setting up inflammation in the tissues. In other cases where obstructed from tumors or inflammation of the pancreatic duct, we do not have pancreatitis. In cases where a stone has been in the common duct for a short time, and then passes into the bowel, after having made obstruction in the common duct sufficiently long to pass bile into the pancreas, the stone may not appear in the common duct, but it has been there. In the bile channel we have a relief from pressure, as everyone knows, by distention of the bile duct itself, or the gall-bladder. In that way we have a decrease in pressure; whereas, on the other hand, we have very extensive pressure in an organ that has no relief from such pressure.

DR. J. C. SEXTON, Rushville:—I wish to say a word in regard to the criticism of not mentioning the work of Opie. I would simply acknowledge that I devoured him wholesale. Opie's work on diseases of the pancreas is a masterpiece. He has taught us practically all we know of the causation of pancreatitis, and very much of the anatomy of the pancreas had been overlooked up to his time. As to the surgery of the pancreas, we of course owe more to Robson than to any other. We have found out one thing for sure, and that is, that acute hemorrhagic pancreatitis will kill you unless somebody gets to it early enough to evacuate the trypsin toxins. It is caused usually from gall-stones. Relief of the stones will cure many cases.

There are cases of pancreatitis, the causation of which has not yet been revealed. The pancreas becomes hard and infiltrated, and feels exactly like cancer, and more than one patient has been operated on for cancer and the patient condemned to die, and he goes on and outlives his surgeon and all the people who are present. This is a form of chronic pancreatitis. Some patients do get well of the chronic form. It looks as though it would be impossible to get well of the acute hemorrhagic form. I operated on one of these hemorrhagic cases under a wrong diagnosis

of acute intestinal obstruction. I found no obstruction, but did find next day at the post-mortem a pancreas about the size of a good big full-grown rat, and it looked as though it had been pounded with a hammer. It was black and blue. There was no fat necrosis about it, because it takes longer than a few hours for fat necrosis to occur.

ACUTE DILATATION OF THE STOMACH: TREATMENT.*

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In our consideration of the treatment of acute dilatation of the stomach, we should first direct our attention to methods of prevention. I firmly believe that one is far less liable to meet with this condition if the operation has been deftly and quickly done. If the intestines have been tugged and pulled upon, if sponges have been crowded roughly into the abdominal cavity, if the operation has been a long one and large quantities of anesthetics given, the patient is much more liable to acute dilatation. It seems to me that gentleness should come next to cleanliness in surgery. Long, sweeping incisions that extensively expose the intestines have been condemned by most operators on the ground that ileus and acute dilatation of the stomach and intestines frequently follow.

The after-care of the patient is important. A patient should not be forced to remain on his back. As soon as he expresses a desire to be moved he should be turned upon his side. This will frequently enable him to empty his stomach and, in my judgment, prevent, in many instances, acute dilatation. The patient should be gotten out of bed as soon as conditions will warrant. The idea of keeping the patient in bed for three or four weeks following an abdominal operation has been abandoned by most operators. I get my patients out of bed as soon as their condition will permit it: usually from four to ten days.

The administration of food following abdominal operations is important. Most surgeons have discarded milk and are using broths, strained soups of various kinds, as barley, rice gruel and albumin water. Dr. Robert F. Morris in a letter to me says: "My chief dependence in treatment is the mechanical side. Patients are placed upon the abdomen and the stomach is emptied frequently, sometimes as often as every two or three hours, with the siphon tube. These resources have been so distinctly and promptly

beneficial that the condition causes one no grave anxiety. I see very few cases in my own practice, because of my belief in the advantages of rapid operating, and the employment of short incisions as much as possible. The less shock of the abdominal sympathetic ganglia, the less tendency to acute dilatation of the stomach."

In any case of acute dilatation of the stomach, whether it is following a surgical operation, labor, typhoid fever, pneumonia or what-not, the stomach should be immediately evacuated, preferably by lavage, as the pressure exerted by the distended organ is a source of actual danger. It has been my practice in the last two years to wash the stomach if the nausea continues longer than twelve hours. And I am firmly convinced that I have prevented cases by this means. All the authorities I have consulted are agreed that early and frequent washing of the stomach gives the best results. William J. Mayo, in answer to the question, "How do you treat acute dilatation of the stomach?" says: "Early and repeated emptying and irrigation with hot water seem to stop this condition. We have also had the patient lie upon the right side and face as much as possible, as some believe that pressure on the duodenum is the cause. We have not seen any particular benefit from this latter procedure."

Dr. Albert J. Ochsner answered the question as follows: "My treatment in these cases consists in having the nurses watch all cases of abdominal operations very carefully, and in case dilatation occurs, insert a stomach tube and wash out the stomach, and repeat this as often as is necessary to overcome any recurrence. Aside from that I never use any other form of treatment."

Dr. J. B. Murphy, in answering the question, says: "In the management of our cases here we meet them all by stomach washing. If the patient has nausea the evening of the operation or the next morning, the stomach is always washed out. Since we have recognized the disease, we have been able to easily control all cases. We have not had a death from it in a long time."

Dr. C. L. Bonifield says: "I treat by purgation if that be possible, and by gastric lavage, by keeping the stomach empty and the administration of strychnia and eserine by hypo. I believe gastro-enterostomy is found valuable in these cases, though as yet I have not had an opportunity to put my belief in practice."

Dr. Robert Coleman Kemp warmly advocates the stomach tube. He advises its early and frequent use. He points out the important fact that the mistake generally made is that the surgeon waits until the symptoms appear quite marked, or until the patient vomits before he washes the

* Read before the Indiana State Medical Association, October 8, 1909.

stomach. This is an important fact for us to remember. It can do no harm to wash a stomach that is disturbed even though we do not have vomiting. And it seems bad practice to wait until we have the distressing symptoms of the advanced cases before we begin treatment by washing.

Conner calls attention to the fact that the stomach will rapidly redistend in the severe cases and recommends washing at frequent intervals. Lavage may have to be kept up for several days, according to the tendency to redistend. It is better to carry the treatment a few hours or days longer than necessary than to stop too soon.

The only food I give by the way of the stomach is through the tube after I have finished washing. I administer a raw egg in about 4 to 6 ounces of milk. If thirst be severe, I resort to hypodermoclysis. Rectal feeding should be employed. This should be continued for several days, until the symptoms have disappeared. In case the intestines are also dilated, flushing is of the greatest value. I do not think it is wise to try high colon flushing, as is usually done. I am convinced that it is next to impossible to pass a tube much beyond the rectum. If the hips are elevated and the water allowed to flow in slowly, a larger quantity will find its way into the bowel. With the expulsion of the water we usually have a free discharge of gas. It often stimulates peristalsis. It is my practice as soon as the stomach is washed to give calomel, 3 to 5 grains, in 1 ounce of water, through the stomach tube. This is followed by a saline by the same method, four to six hours later. I have little faith in drugs in this condition, but good results are reported from the use of tincture of belladonna. It lessens the secretions of the mucosa of the stomach and relaxes pyloric spasm. It is usually given in five to ten-drop doses, combined with strychnin gr. 1/60 to 1/30, every four to six hours. Eserin grs. 1/100 has been recommended, but is depressing. Kemp reports a recent case in which he used it in 1/50 gr. doses, with good results. In my judgment, the measure next in importance to stomach lavage is the postural method.

The position used depends upon the anatomical type of the distention. In the acute gastrointestinal or mixed type, the patient should be placed on an inclined plane, nearly sitting up. This will often relieve cardiac and respiratory symptoms by relief of pressure. Kemp reports a case of acute dilatation in typhoid fever where the tympanitic area of the thorax was lowered four inches, with marked improvement in respiration and pulse.

The second position used is elevation of the foot of the bed to relieve pressure on the duodenum. There is a serious objection to this method on account of its interference with the respiration and heart's action.

In the gastroduodenal type the position best suited, from an anatomical point of view, is on the right side. This, many times, is of great value, and will enable the patient to completely evacuate the stomach. I have seen the nausea relieved almost immediately by this simple method.

In the gastroduodenal type the abdominal position seems the best. Schnitzler devised this method. I have never used it. Baumler, in one of his cases, kept the patient in the knee-elbow position for fifteen minutes in each two hours; the remainder of the time on the belly, with good results.

OPERATIONS.

Almost all cases operated upon have died. Very few surgeons are advocating operative interference. The stomach has been opened and evacuated several times; all the cases were unsuccessful. Gastroenterostomy has been tried several times with only one success. Kemp suggests that gastric fistula might be tried. No one seems to have tried it. In one case a kink was found at the duodeno-jejunal junction. This was relieved and the patient recovered. It seems to me from the experience of those who are doing a great deal of abdominal surgery that the simple methods are almost always successful. If lavage is practiced early and often, almost all our cases will be saved.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.

MUNCIE, IND.

(Continued from page 7, Vol. III.)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

EGBERT, GEORGE.—Marion (1823-1886). S. T. 1887, 189.

EICHELBERGER, WILLIAM C.—Terre Haute (1840-1903). S. T. 1903, 342.

ELBERT, SAMUEL A.—Indianapolis (1832-1902). I. M. J., Vol. xxi, 91.

ELDER, ELIJAH S.—Indianapolis (1841-1894). S. T. 1895, 400. Dr. Elder was secretary of the State Medical Society from 1879 to 1894, and its president at the time of his death. He filled several chairs in the Medical College of Indiana, was professor of the principles and practice of medicine from 1888 until his death and dean from 1890. He contributed to the State Society a number of valuable papers: "Morbo Lacteo," Trans. 174, 113; "Immediate Placental Deliv-

ery in Natural Labor," Trans. 1879, 93; "Placenta Previa: Occult Hemorrhage and Malpresentation," Trans. 1880, 216; "Observations Upon and Glances at Some Health Resorts in the United States, West of the 100th Meridian," Trans. 1882, 152; "Etiology of Pneumonia," Trans. 1886, 161; "Pyrexia. Hyperpyrexia and Fever," Trans. 1891, 111. See biographical sketch, Stone, 156; also I. M. J. (A.W.B.), Vol. xii, 437.

ELLIS, CHARLES S.—Wabash (1824-1895). Served faithfully as a soldier in the Eighth Reg. Ind. Vols., and later Lieut.-Col. of the 153rd Reg. Ind. Vols. I. M. J., Vol. xiii, 337.

ELLIS, HAMILTON E.—Greencastle (1826-1880). S. T. 1881, 241.

ELROD, MOSES N.—Columbus (1838-1907). S. T. 1907, 474.



THOMAS W. FLORER.

ESPY, JAMES O.—New Palestine (1845-1881). S. T. 1885, 213.

EVANS, JOHN.—Died July 3, 1897, aged 83 years. At one time he was superintendent of the Indiana State Insane Asylum. In 1848 he became a lecturer in Rush Medical College. He was instrumental in founding Evanston, Ill., and for a time president of Northwestern University at Evanston. He was an ex-governor of Colorado, in which state he died. I. M. J., Vol. xvi, 79.

EVERTS, ORPHEUS.—Cincinnati (1826-1903). Dr. Everts was born at Salem, Indiana, Dec. 26, 1826. He graduated from the Indiana Medical College at Laporte in 1846, and later at University of Michigan, and Rush Medical in 1867. He served as surgeon of the Twentieth Ind. Vols. in the Civil War. In 1868 he was made superintendent of the Central Hospital for Insane, a position he occupied with honor for eleven years. Later he assumed charge of the Cincinnati Sanitarium as superintendent, which position he held at the time of his death, June 20, 1903. See for biographical sketches, Robson, p. 582, Stone, 161, and I. M. J., Vol. xxii, 36. (Picture.)

FANNING, FREDERICK W.—Butler (1841-1906). I. M. J., Vol. xxv, 195.

FARQUHAR, ALLEN H.—Ridgeville (1835-1904). S. T. 1904, 352.

FEATHERSTON, JOHN R.—Indianapolis (1841-1886). S. T. 1886, 215.

FERGUSON, DAVID.—Union City (1813-1884). S. T. 1884, 221.

FERREE, FRANK M.—Indianapolis (1856-1889). S. T. 1890, 155.

FERREE, SHADRACH L.—Indianapolis (1830-1901). S. T. 1901, 483.

FERRIS, SAMUEL.—New Castle (1822-1902). S. T. 1902, 413.

FIELD, NATHANIEL.—Jeffersonville (1805-1888). Dr. Field was born in Jefferson county, Kentucky, Nov. 7, 1805. In the fall of 1829 he located in Jeffersonville. In 1839 he was a member of the State Legislature. He was one of the first anti-slavery men of the West; inherited several valuable slaves and soon afterward emancipated them. He was surgeon of the Sixty-sixth Reg. Ind. Vols. during the Civil War. He was president of the State Medical Society in 1869. He contributed a number of valuable papers to medical journals and also to the State Society. The following papers appear in the Transactions: "Cholera," 1868, 114; "The Troubles and Responsibilities of the Medical Profession," address, 1869, 1; "Thoracentesis," 1872, 77; "The Expectant Mode of Medication," 1873, 31; "The Etiology of Endemic Fevers," 1882, 84; "A Notice of Bacteria Microscopy," 1883, 100, and "Blood Poisoning," 1887, 93. In the latter article he refers to the case of the late President Garfield. Died at Jeffersonville, Aug. 18, 1888. See Robson, 173.

FISHER, SAMUEL.—Greencastle (1823-1887). S. T. 1888, 207.

FITCH, GRAHAM N.—Logansport (1808-1892), a native of New York, located in Logansport in 1834. In 1844 he was appointed to a professorship in the Rush Medical College. He occupied the chair of Professor of Principles and Practice of Surgery in the Medical College of Indiana for four years, and was Emeritus Professor at the time of his death.

Dr. Fitch was a prominent politician. He was a member of the Indiana Legislature from 1836 to 1840. From 1848 to 1852 he represented his district in Congress, and from 1856 to 1861 he was United States Senator from Indiana.

His grandfather was a soldier of the Revolution; his father of the war of 1812, and Dr. Fitch himself rendered valuable service in the Civil War as Colonel of the Forty-sixth Reg. Ind. Vols.

He died in Logansport, Nov. 28, 1892, at the ripe age of 84. (Stone, 161.) Also I. M. J., Vol. xi, 214.

FLETCHER, WILLIAM B.—Indianapolis (1837-1907). S. T. 1907, 496. Dr. Fletcher was a man of varied attainments, as physician and scientist. His experience comprised soldier, physician, teacher, author and specialist, and in every department he was with the advance guard. The scope of this work will not admit of details. The reader is referred to the following references for his larger history: Physicians and Surgeons of the U. S., Robson, 129, Stone, 163, and Dr. R. H. Ritter has furnished an excellent biographical and obituary notice in the Transactions, 1907, 496, and in the same volume, 498, James Whitcomb Riley pays him a pretty compliment in a poem entitled "The Doctor."

His medical and scientific papers were comprehensive and numerous. To the State Society he furnished the following, in Transactions: "Human Entozoa," 1866, 88; "Cerebral Circulation in the Insane," 1887, 105; "Purulent Absorption Considered as a Cause of Insanity," 1892, 164, and "The Effects of Alcohol Upon the Nervous System," 1895, 335. Portrait, frontispiece, 1907. *I. M. J.*, xxv, 439. (Picture.)

FLORES, THOMAS W.—(1822-1907). *S. T.* 1907, 483. Dr. Flores was a native of Ohio, and came to Indiana when he was 10 years old. He graduated from the Ohio Medical College in 1850, and began practice at Alamo, and later removed to Crawfordsville. In 1849 Dr. Flores was a delegate to assist in the organization of the Indiana State Medical Society at Indianapolis, and was made one of the vice-presidents. At the beginning of the Civil War he was made surgeon of the Twenty-sixth Reg. Ind. Vols. and served until 1866. At the close of the war he made his home at Meridian, Miss., until 1875, when he removed to Waxahachie, Texas, where he continued to practice medicine until 1905. During the administrations of Presidents Arthur and Harrison he served as postmaster at his home.

In 1899 he attended the golden jubilee of the Indiana State Medical Society, held at Indianapolis, being one of four living charter members of the State Society, namely, William H. Wishard, Thomas W. Flores, John M. Gaston, and Patrick H. Jameson. *I. M. J.*, Vol. xxv, p. 500. See pictures of the four persons named, Trans. 1899, facing p. 9.

FORD, JAMES.—Wabash (1812-1898). Dr. Ford was a native of Ohio, born Jan. 19, 1812, and died at Wabash, Dec. 30, 1898. Was the second man in Wabash to enlist in the Civil War. Was surgeon of the Eighth Ind. Vols., then a brigade surgeon, and in 1863, when he resigned, a medical director. See *I. M. J.*, Vol. xvii, 281.

FORD, JOSEPH H.—Auburn (1823-1905). *S. T.* 1905, 445.

FRANCE, JOHN W.—Dunkirk (1858-1889). *S. T.* 1892, 279.

FREEMAN, WILLIAM.—Camden (1809-1883). *S. T.* 1883, 280. For a short time was surgeon of the Seventh Reg. Ind. Cav.

FRINK, CHARLES S.—Elkhart (1835-1893). *S. T.* 1893, 261. Was commissioned by the President, Assistant Surgeon of Volunteers, Oct. 4, 1862, promoted to Surgeon, March 3, 1864, and to Brevet Lieut.-Col., Aug. 15, 1865.

FRITZ, PERRY L.—Alexandria (1865-1899). *S. T.* 1900, 323.

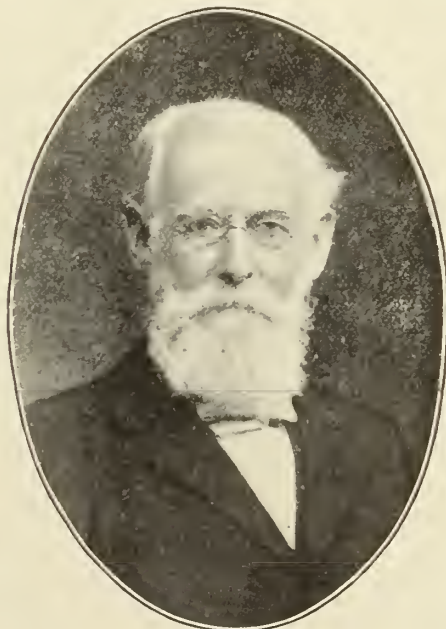
FRY, THOMAS W.—Lafayette (1814-1873). *S. T.* 1874, 183. Dr. Fry first practiced at Crawfordsville and later at Lafayette, where he died, Feb. 24, 1873. He was surgeon for some time of the Eleventh Reg. Ind. Vols. Dr. S. G. Irwin, of Crawfordsville, contributes a biographical sketch in the Transactions named. In the volume named, p. 107, Dr. W. W. Vinnege, of Lafayette, contributes a record of an interesting mal-practice suit in which Dr. Fry sued for a bill, and was successful.

FUNKHOUSER, DAVID.—Indianapolis (1820-1886). *S. T.* 1894, 212n. Dr. Funkhouser was born in Virginia, May 31, 1820. Graduate of Bethany College, Va., 1845, and of Jefferson Medical in 1847, and soon afterwards located in Indianapolis, where he lived, and died July 21, 1886. He was a prominent

physician of our capital. I have a kindly remembrance of the good doctor who vaccinated me in 1861, as I was on my way to the Civil War. See a very interesting and beautiful tribute to his memory by Dr. P. H. Jameson, Trans. 1894, 212n.

GADDY, NELSON D.—Seymour (1831-1901). *I. M. J.*, Vol. xix, 446. Contributed "A Few Thoughts Concerning Systematic Prevention of Disease." Trans. 1883, 63.

GALBRAITH, THOMAS S.—Seymour (1846-1904). *S. T.* 1904, 353. He began practice in Bartholomew county, but removed to Seymour in 1870. Here he continued in practice up to the time of his death, except from 1887 to 1889, when he was superintendent of the Central Hospital for the Insane, and from 1895 to 1897, when he conducted a similar institution in Oklahoma. See Stone, 179.



JOHN M. GASTON.

GALL, ALOIS D.—Indianapolis (1814-1867). Was assistant surgeon and later surgeon of the Thirteenth Reg. Ind. Vols. Stone, 179. (Picture.)

GAREY, DUMONT.—New Albany (1855-1906). *S. T.* 1906, 492.

GARVER, JOHN JAMES.—Indianapolis (1845-1901). *S. T.* 1901, 484. Dr. Garver was a soldier of the Civil War, and upon his return home pursued the study of medicine, graduating at the Ohio Medical College in 1876. He immediately located at Indianapolis. He contributed an article on "Asiatic Cholera" to the State Society. Trans. 1885, 195. See Stone, 180.

GASTON, JOHN M.—Indianapolis (1818-1901). *S. T.* 1901, 485. Dr. Gaston was born in Newbury, Pennsylvania, Sept. 25, 1818, and died at Indianapolis, Jan. 11, 1901. He graduated at the University of New York in 1848. While a student there he witnessed the introduction of chloroform by Dr. Valentine Mott and to Dr. Gaston was given the honor of first using it in Indianapolis. (Dr. Theodore Potter.) He was one of the organizers of the Indiana State Medical Society in 1849, and was one of the four survivors at the golden jubilee in 1899. The portraits of the four, Drs. W. H.

Wishard, T. W. Florer, J. M. Gaston and P. H. Jamieson, are given on the same page of the Transactions for 1899. S. Dr. Gaston was the first to pass away, and then Dr. Florer, in 1907.

In 1850 he went to California with others in search of gold, and returned two years later. He contributed an article on "Propylamin in Rheumatism." *Ind. Jour. of Med.*, Vol. i, 353. See *I. M. J.*, Vol. xix, 316.

GATCH, JAMES D.—Lawrenceburg (1831-1907). Dr. Gatch was born at Milford, Clermont county, Ohio, March 5, 1831, and died Jan. 27, 1907. Was assistant surgeon of the Sixteenth Reg. Ind. Vols. President State Medical Society, 1890. He contributed to the State Society, "Harmony and Associated Action in Connection with State Medicine," *Trans.* 1880, 153. President's address, "What of the Day?" *Trans.* 1890, 5.

GAUSE, THOMAS.—Greensfork (1846-1882). *S. T.* 1883, 268.

GEIS, JOHN F.—Indianapolis (1868-1904). *S. T.* 1904, 354. "He was born and reared in Indianapolis. With a special interest in chemistry, he took post-graduate work at De Pauw University under Dr. P. S. Baker, whose assistant he afterward became in the Medical College of Indiana. He was promoted in the department of medical chemistry until, after the death of Dr. Baker, he became his successor in the full chair of chemistry and toxicology."—Dr. Theodore Potter. He is the author of a work entitled "Physiological and Clinical Chemistry," December, 1902. See *I. M. J.*, Vol. xxii, 415.

GERRISH, JAMES W. F.—Seymour (1831-1883). *S. T.* 1884, 212. Dr. Gerrish was assistant surgeon and later surgeon of the Sixty-seventh Reg. Ind. Vols. His voice and pen were always on the right side of every moral reform. See *Memoriam*, *I. M. J.*, Vol. ii, 109.

GIFFORD, THOMAS.—Lanrel (1816-1885). *S. T.* 1886, 199.

GLASGO, THOMAS A.—Brazil (1839-1908). *Jour. Ind. State Med. Assoc.*, Vol. i, 367.

GODWIN, GEORGE W.—Chesterfield (1799-1865).

GOLDSBERRY, JOHN A.—Bloomington (1835-1901). *I. M. J.*, Vol. xix, 403. Was assistant surgeon First Heavy Artillery (21st) Reg. Ind. Vols.

GOOD, ALONZO H.—Muncie (1843-1908). *Jour. Ind. State Med. Assoc.*, Vol. i, 439. Was a soldier in the Sixty-ninth Reg. Ind. Vols.

GOSS, JAMES M.—Freedom (1840-1892). *S. T.* 1892, 288.

GRAHAM, ANDREW E.—Richland (1824-1897). *S. T.* 1898, 384.

GRANT, GEORGE H.—Richmond (1868-1908). Dr. Grant was elected president of the Indiana State Medical Society in 1905 and presided at the session of 1906; title of address was "Medical Education and Medical Progress," *Trans.* 1906, 1. He contributed a number of articles to medical journals. See *I. M. J.*, Vol. xxiv, 40. *J. I. S. M. A.* (with excellent portrait), Vol. i, 401.

GRAY, JOHN M.—Noblesville (1836-1899). *I. M. J.*, Vol. xviii, 140. Was surgeon of the Thirty-ninth Reg. Ind. Vols.

GRAY, SAMUEL C.—Warsaw (1821-1883). *S. T.* 1883, 276.

GRAYSTON, FREDERICK S. C.—Huntington (1823-1898). *S. T.* 1898, 398. Born in England, he emigrated to America in 1850. Graduated at the Rush Medical College in 1863. In 1886 he was elected to a professorship in the Fort Wayne Medical College, filling for several years the several chairs of diseases of children, theory and practice of medicine, and pathology.

GREEN, JAMES W.—Shelbyville (1825-1896). *S. T.* 1897, 346.

GREEN, LOT.—Rushville (1847-1905). *S. T.* 1905, 446.

GREGG, HENRY.—Roanoke (1815-1887). *S. T.* 1887, 195.

GREGG, JAMES S.—Fort Wayne (1830-1890). *S. T.* 1890, 160. Dr. Gregg was a native of Pennsylvania. Graduated at Jefferson College in 1866, after having attended one course of lectures in Cleveland in 1855. He located in Fort Wayne in 1866. He was president of the State Society in 1886. He contributed the following named articles to the State Society, and published in the Transactions: "Medical Education," 1876, 107; address, "Glimpses of a Few of the Beacon Lights of Medical History," 1886, 2. In 1886, 135, and 1889, 179, each, "Locomotor Ataxia," in which he describes his own case, dying one year later from the disease, Jan. 18, 1890.

GREGG, VINCENT H.—Connersville (1825-1895). *S. T.* 1896, 256. Surgeon 124th Reg. Ind. Vols.

GUYER, O. K.—Lewisville (1853-1902). *S. T.* 1902, 414.

HADLEY, EDWIN.—Richmond (1824-1890). *S. T.* 1891, 280.

HADLEY, EVAN.—Indianapolis (1845-1903). Dr. Hadley was for thirty years a leading practitioner of Indianapolis. He was consultant at the City Hospital for nearly twenty-five years and for fifteen years held medical clinics before the college students at the hospital. His numerous reports of hospital and clinical cases were always full of interest. He contributed a number of papers to the State Society, which appear in the Transactions; "Addison's Disease—Report of a Case," 1885, 55; "Emmenagogues," 1886, 82, and "Biliousness," 1895, 127. Two years prior to his death, which occurred May 12, 1903, he was compelled to relinquish practice owing to organic heart disease, and removed to his boyhood home at Mooresville, where he passed away cheered by the Christian's hope. *I. M. J.*, Vol. xxi, 528. Picture on p. 528.

HAGGERTY, ROBERT J.—Elkhart (1822-1880). *S. T.* 1880, 229.

HAINES, ABRAM B.—Aurora (1823-1887). *S. T.* 1888, 216.

HALL, WESLEY C.—Franklin (1830-1899). *I. M. J.*, Vol. xviii, 361. Was a soldier in the Civil War.

HALLANAN, JOSEPH.—Logansport (1850-1909).

HAM, LEVI J.—South Bend (1805-1887). Was a native of Maine. He removed to South Bend prior to the Civil War, and was surgeon of the Forty-eighth Reg. Ind. Vols. Robson, 135.

HAMMOND, FRANCIS J.—Indianapolis (1837-1895). *S. T.* 1895, 409. Was a native of England, and came to America in July, 1887. During the Russo-Turkish War, for a period of eighteen months, he practiced medicine and surgery in Constantinople. He located in Indianapolis soon after his arrival in the United States. He was a close friend to Luther

Holden and Sir James Paget. His death was due to leucocythemia, and occurred Feb. 1, 1895. See I. M. J., Vol. xiii, 385.

HARDING, MYRON H., SR.—Lawrenceburg (1810-1883). S. T. 1886, 205. He was elected president of the State Society in 1865, and has contributed the following articles to that organization, as shown by the Transactions: "Report of Committee on Practice of Medicine," 1853, 24; "President's Address," 1866, 21, and "Notes on an Epidemic of Erysipelas and Puerperal Fever, at Manchester, Indiana, during the winter of 1842-3," 1885, 114. See Robson, 103.

HARDING, MYRON H., JR.—Lawrenceburg (1855-1879). S. T. 1880, 241.

HARGROVE, WILLIAM S.—New Salem (1843-1894). S. T. 1895, 203.

HARRIS, RICE C.—Ellettsville (1834-1894). S. T. 1895, 406.

HARRIS, WILLIAM C.—Roachdale (1827-1901). S. T., 1901, 486.

HARROD, SANFORD H.—Canton (1827-1888). S. T. 1888, 199.

HARTLOFF, RICHARD.—Evansville (1845-1900). S. T. 1901, 487.

HARVEY, THOMAS B.—Indianapolis (1827-1889). S. T. 1890, 158. Dr. Harvey was a native of Ohio. Graduated at the Ohio Medical College in 1852. Practiced at Plainfield from 1852 to 1862, when he removed to Indianapolis, where he remained until his death, Dec. 5, 1889, dying from a stroke of apoplexy, received while delivering a lecture. He was elected president of the State Medical Society in 1880. He stood high as a physician, gynecologist, author and teacher. His friends were numerous, and his personal magnetism attracted physicians and students. He wrote valuable articles for medical journals, and contributed a number to the State Society: "Report on New Remedies," 1861, 39; "Puerperal Eclampsia," 1863, 37; "Prevention and Treatment of Laceration of the Perineum," 1871, 113; "The Advance in Medicine—Address," 1881, 1; "Laceration of the Cervix Uteri," 1883, 245; "Synopsis of Paper on Laparotomy," 1886, 65; "Ovarian Disease Complicated by Pregnancy," 1887, 150, and "Conditions Rendering Diagnosis Difficult in Pelvic and Abdominal Diseases," 1888, 100. For an excellent biographical sketch, see Stone, 209. See also "Memorial Remarks on the Late Dr. Thomas B. Harvey," by Drs. A. W. Brayton, James F. Hibberd, William Lomax, William H. Wishard and L. H. Dunning, Transactions, 1890, 168. Also I. M. J., Vol. viii, 153. (Editorial.)

HARVEY, WILLIAM F.—Plainfield (1825-1901). I. M. J., Vol. xix, 315.

HASTY, GEORGE.—Indianapolis (1835-1905). At different times he occupied the chairs of chemistry, anatomy and surgery, and also dean, of the Physio-Medical College of Indiana. For some time he was editor and publisher of the Physio-Medical Journal.—Dr. W. A. Spurgeon.

HAUGHTON, RICHARD E.—Richmond (1827-1909). Was born in Fayette county, Dec. 8, 1827, and died June 4, 1909. Dr. Haughton was elected president of the State Medical Society in 1874, and presided at the session of 1875. He was quite a contributor to medical journalism. His contributions to the State Society were recorded in the Transactions as follows: "A Report on the Treatment of Syphilitic Diseases,

Without the Use of Mercury," 1859, 23; "Report of the Committee on Diphtheria," 1860, 51; "Epidemic Cerebro-Spinal Meningitis," 1865, 47; "The Pathology and Treatment of Cholera," 1866, 60; "Tracheotomy in Cynanche Trachealis, Diphtheria and Laryngitis," 1867, 122; "Reduction of Dislocation of the Hip; Principles of the Flexion Method," 1870, 71; "Influence in Disease of the Nervous System," 1871, 143; "The Pathology of Malignant and Semi-malignant Growths," 1872, 11; "Lithotomy, with Report of a Case," *ib.*, 85; "On Thrombosis of the Arteries of the Extremities, with an Illustrative Case," 1873, 37; "Does Anything Pass the Capillaries Except Normal Blood Cells?" 1874, 83; "President's Address: Life, Mind, Force or Vital Dynamics," 1875, 1; "Dilatation and Contraction of Blood Vessels and Tubular Structures," 1877, 61; "A Case of Fracture of the Cervical Spine," 1879, 144, and "Amputation at the Knee-joint," 1881, 75.

He was a practitioner for sixty years, one-half of that time at Richmond.

HAYMAKER, GEORGE W.—Charleston (1831-1900). S. T. 1901, 488.

HAYMOND, WILLIAM S.—Indianapolis (1823-1885). S. T. 1886, 211. Dr. Haymond was a native of West Virginia, and came to Monticello in 1851. Entered the service in 1861 as assistant surgeon of the Forty-sixth Reg. Ind. Vols. In 1874 he was elected a member of Congress. In the spring of 1877 he located in Indianapolis, and in 1879 was elected to the chair of surgery in the Central College of Physicians and Surgeons, which he continued to hold until his death, Dec. 24, 1885. He contributed to the State Society an article on "The Collapsed State of Cholera," *Trans.* 1867, 100, and a second article on "Human Longevity," *ib.*, 1880, 73. For biographical sketch see Stone, 212. See also I. M. J., Vol. iv, 156.

HAYS, FRANKLIN W.—Indianapolis (1858-1908). Born in Eldorado, Ohio, April 2, 1858. While yet a boy his parents removed to Columbus, Indiana. He graduated from the Medical College of Indiana in 1880. For a time he was assistant to the chair of chemistry and toxicology in his Alma Mater. Later he lectured on dermatology and venereal diseases, and was made superintendent of Bobbs Free Dispensary. Eventually he was elected to the chair of materia medica, therapeutics and dermatology, and was made secretary of the college. See sketch, I. M. J., Vol. xxvi, 412. For biographical sketch see Stone, 636.

HAYES, GEORGE C.—Hillsboro (1836-1903). S. T. 1904, 355.

HEADY, WILLIAM S.—Jamestown (1849-1903). S. T. 1903, 344.

HEATWOLE, JOSEPH H.—Goshen (1853-1899). S. T. 1900, 324. Born in Kansas, April 6, 1853. Graduated at the Ohio Medical College in 1878. In 1883 located in Goshen. Was once mayor of that city. Early in the Spanish-American War was commissioned as major and commissary of volunteers. At the close of the war he remained and became one of Gen. Woods' most efficient officers. His official duties did not exact any professional duties of him, but realizing that his services were needed for fever subjects, he went to their relief, and succumbed to yellow fever, at Santiago de Cuba, July 7, 1899.

HEAVENRIDGE, ALLEN.—Stilesville (1829-1902). S. T. 1902, 415.

HEDGES, ISAAC B.—Clinton (1820-1883). S. T. 1883, 275.

HELM, JEFFERSON.—Rushville (1803-1888).

HELM, JOHN C.—Muncie (1812-1872).

HELM, JOHN H.—Peru (1826-1899). He was a native of Tennessee. Located in Peru in 1860. He served one year in the Mexican War. Was elected president of the State Medical Society in 1875, and delivered an address at the following session. *Trans.* 1876, 1, on "State Medicine." For biographical sketch see Robson, 52. *I. M. J.*, Vol. xvii, 453.

HENDERSON, HARVEY D.—Salem (1819-1896). *S. T.* 1896, 270.

HENDERSON, JAMES T.—Covington (1846-1905). *S. T.* 1905, 447.

HENNING, ROBERT.—Jeffersonville (1847-1897). *S. T.* 1897, 358.

HENSLEY, JOHN H.—Madison (1857-1897). *S. T.* 1897, 361.

HENTHORNE, LEWIS S.—Indianapolis (1846-1895). He was a soldier of the Civil War (86th Ohio Vols.). Professor of Physiology in the Indiana Dental College. *I. M. J.*, Vol. xiii, 415.

HERRMANN, JOHN.—Logansport (1834-1899). *S. T.* 1900, 325.

HERVEY, FRANK F.—Fortville (1856-1893). *S. T.* 1893, 215.

HERVEY, JAMES W.—Indianapolis (1819-1905). *S. T.* 1905, 448. He was one of the very early members of the State Society, and was a contributor to its *Transactions*: "The Utility of Force and Its Controlling Influences in Medicine," 1873, 99; "A State Board of Health and an Asylum for Chronic Inebriates," 1876, 133; "How to Secure Medical Legislation," 1877, 51; "Some of the Unsolved Problems of Public Hygiene and Synteretic Jurisprudence," 1880, 162; "Mental Hygiene," 1881, 37. He was surgeon of the Fiftieth Reg. Ind. Vols. He was known as the father of the State Board of Health. He was an uncompromising temperance man, and more than fifty years ago wrote and published "The Scroll and Locket, or The Maniac of the Mound; a Temperance Tale." See *I. M. J.*, Vol. xxiii, 332. Also see interesting sketch, Stone, 215.

HESS, LUTHER W.—Cadiz (1821-1883). *S. T.* 1883, 278.

(To be continued.)

EYESTRAIN DUE TO ACCOMMODATION.

LENORE LEEDS, M.D.

RICHMOND, IND.

Accommodation is that function of the eye which permits adjustment for different distances. The adjustable apparatus of the eye consists of the ciliary muscle, the crystalline lens, with its suspensory ligament or the zonule of Zinn, and the iris.

There have been several theories advanced regarding the mechanism of accommodation. Helmholtz believed that the contraction of the ciliary muscle relaxed the tension of the zonule of Zinn on the lens, allowing its capsule to assume a spherical shape, and at the same time permitting the lens to drop downward a little. Later

Tscherning brought forth the theory that the contraction of the ciliary muscle caused the zonule of Zinn to pull on the lens, causing a flattening at its periphery and a spherical projection to be pushed out on its anterior surface.

The modern theory favors partly that of Helmholtz, in that we now know that the contraction of the ciliary muscle does cause a relaxation of the zonule of Zinn, which slackens the pull on the lens and allows its fibers to spring out according to their inherent elasticity. The modern theory also favors that of Tscherning, in that the lens when in a state of accommodation has a projection on the front of the lens, but he was wrong in his idea that it was due to tension of the zonula. The lens thickens in the antero-posterior diameter, the greater convexity occurring on the anterior surface. When the ciliary muscle is relaxed, the zonule of Zinn is tense, the lens is flatter and is focused for parallel rays or infinity, but when contracted there is an increase of thickness and convexity of the lens, with a greater refractive power, so that it is focused for divergent rays or objects closer than infinity. The degree of accommodation varies for every distance, as does also the contraction of the pupil which accompanies accommodation.

The near point or punctum proximum (p. p.) is the nearest point at which the eye can read the finest test type when exerting the greatest amount of accommodation. The far point or punctum remotum (p. r.) is the most distant point at which the eye sees distinctly. In emmetropia the far point is at infinity. The range of accommodation is the distance between the far point and the near point. The amplitude of accommodation is the difference between the refractive power of the eye when at rest and when the accommodation is exerted to the utmost.

Accommodation diminishes as age advances, as the lens becomes less flexible and elastic each year, and at about the age of 40 presbyopia begins. Presbyopia is a condition occurring in the crystalline lens, in which there is a rapid loss of its elasticity, so that it becomes flatter and harder and cannot spring out to form a more spherical surface. This rapid loss of elasticity occurs up to the age of 65, when the eye is supposed to have lost all accommodation. One of the characteristic signs of presbyopia is that the patient holds print close to the light and far from the eyes.

In emmetropia the far point begins to recede at the age of 55, and for every five years recedes a one-half diopter, so that at 80 years of age the patient would have to wear a +2.50 diopter for distance.

In hyperopia the near point begins to recede at about the age of 40 and at 42 an extra $\frac{1}{4}$ diopter over the distance glass can be comfortably worn for reading. This reading glass will have to be gradually increased as age advances. These people should be fitted every two or three years, especially up to the age of 55, as the changes are most rapid up to this time. This, of course, varies according to the individual. We would find that many of these patients would not suffer with so many nervous symptoms, attributed to the menopause, if they were properly fitted and at frequent intervals. At 42, on an average, a $+ .25$ sphere should be put on over the distance glass; at 45, a $+ .50$; at 50, a $+ 1.50$; at 55, a $+ 2.25$; at 60, a $+ 2.75$; at 65, a $+ 3.00$. It is seldom necessary to give aged persons over $+ 3$ D. or $+ 3.50$ D. extra for reading. The eye becomes more far-sighted as age advances, but the eye does not shorten; if anything, it lengthens. The change in refraction has nothing to do with accommodation, but is due to flattening of the lens.

The accommodation is a great factor to be dealt with in hyperopia or far-sightedness when fitting the eyes for glasses, especially in cases where a cycloplegic is not employed. Often in these cases the patients, especially if they are nervous or hysterical, do not seem to be able to relax their accommodation and after a period of reading the test types the examiner suddenly finds that the patient can not read the types as well as he did before, and though he may have read them with a $+ 1$ D. or a $+ 1.50$ D., he now takes a $+ .50$ D. or even a $+ .25$ D. This is a spasm of accommodation and if sufficient time is spent with the patient it can often be overcome. Let the patient close the eyes for a few minutes and he may return to the test with clear vision and there may be no trouble. Others will have to have this repeated several times, meantime gradually working up and down with the lenses until the oculist believes that he has the hyperopia and astigmatism corrected. Hyperopic patients bring on asthenopic symptoms or eyestrain by an excessive use of their accommodation. The effects of excessive accommodation are:

1. Pulling forward the chorioid, and if astigmatism is present a see-sawing of accommodation takes place with a consequent congestion of the chorioid.

2. The veins of the venæ vorticosæ may be further bent and compressed as they pass through the chorioid and sclera on a slant and so impede the outflow of blood.

3. Enlargement of the ciliary body.

4. Enlargement of the ciliary body causes an encroachment on the circumlental space, which is the space between the lens and the ciliary body.

5. Narrowing or blocking of Schlemm's canal and so preventing the fluids of the eye being drained away.

All these symptoms taken together predispose to that dread disease, glaucoma.

It is amazing that so many intelligent physicians neglect their eyes at about the age of 40 and put off as long as possible getting reading glasses. There is no doubt that people suffer a great deal from presbyopic asthenopia, and there is no gain in not putting on a reading glass early.

SPECIAL ARTICLE

OUR STATE MEDICAL ASSOCIATION.

The constitution and by-laws of the Indiana State Medical Association impose upon the officers of this society serious responsibilities and weighty duties. On the performance of these various tasks rests largely the success of the association. The officers unassisted, however, cannot achieve great results and renown for the society. To do this there must be presented at every step the hearty cooperation of the entire membership. In the medical world the standing of the profession in Indiana is gauged largely by the results accomplished by its representative body, which is the State Association. With a wideawake, solidly-amalgamated, hard-working State Association, notice is served on the world that the medical profession is keeping step and marching in the front rank with the progressives who are "doing things." An inactive body will wield a contrary influence. Happy we are indeed because of the high plane on which we work. Gratitude is expressed because of the enthusiasm that continuously prevails within the association. In the past the officers of the society performed their arduous tasks with fidelity; they have built a strong structure in which we all rejoice and in which we find great pleasure.

It has been aptly said that "in union there is strength"—a fact that is being rapidly recognized in every sphere of human existence and experience. For every purpose—from the commonest social relation to the gravest responsibilities that confront mankind, even to the preservation of the peace of the world—we find men and governments forming and shaping societies, commissions, associations, combines and clubs and every other imaginable form of organization that the ingenuity of the human mind can conceive or that can

be invented and that can be used for the advancement of the special cause for which it was fashioned. It was for the purpose of advancing the medical profession in the State of Indiana that the State Medical Association was formed. From its inception the association started forward; there has never been a retrogressive step; there has been no hesitation; there has been no faltering. Whatever it has found to do it has done well.

The purposes of this association are for the extension of "medical knowledge; the advancement of medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problem of state medicine so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life." That is a code to which every physician in the state can subscribe. It is more than a pleasure to say here that this association, by the enactment of its principles just quoted, has won for itself, its membership, for the great profession which it represents and for the proud state in which it lives and has its being, a pre-eminence that is at once a joy and blessing to all.

To take a retrospective view of the work the State Association has accomplished is sufficient guide and inspiration "to work on and to toil on." However, as much as has been accomplished, the many great ends that have been reached, the advancements along many lines, the enlightenment that has dawned, the laws that have been enacted and with the friendly relations that have been promoted, there still remains a great work to do. The doors that lead higher and higher are still swinging outward. It is hoped that every member will feel, and does feel, that it is an honor as well as a distinction to be a member of the Indiana State Medical Association. In many ways and for many things are our people and our citizens looking to this society. We cannot appeal to the preachers or to the lawyers or to the laymen for the advancement of our profession. This work we must do ourselves, and the best school for the advancement of the purposes of the association is the association itself. As strong and as influential as is the association, it can be made stronger still and its work and its scope of usefulness widened and extended.

The factor to be used in this accomplishment is to increase the interest and to enlarge the mem-

bership of the component societies. As vigorous as they are and with the splendid results they are achieving, they can still be baptized with new life, new vigor and new enthusiasm. The meetings should be regular feasts. If the politicians can hold love feasts, why not the doctors? What we all need is enthusiasm. "Every good and commanding movement in the annals of the world is the triumph of enthusiasm. Nothing great was ever accomplished without it" (Emerson). Every subject within the lids of our books and the covers of our publications are "live wires" if we would but stop and take from their potential force.

No meeting of a medical society should be "dull" and no meeting held by physicians can fail in some good accomplished. Let the appeal go out for a reinvigoration of the local society for from them do we gain our strength, and let us realize that the State Association depends on the activity of the members of the component societies. If the component societies are ever alert there can be no question as to the ends that will ultimately be reached by the State Association. Every officer of every society, every member of appointed committees, every member who accepts a charge of any degree, should feel the full responsibility of his position and work to bring about results heretofore unknown.

Better not have a committee than a "dead one"; better not have officers unless they have determined that their society will be a power in the community in which it exists. It is but the common duty of members to aid their officers, to attend meetings and do all other things given them to do, and particularly to participate in the proceedings and to assist in shaping, forming, and accomplishing the purposes of the association. There can be no centralization of power in any society where this feeling holds sway.

In this New Year of 1910 may every member of every medical society in the State of Indiana resolve that he will do more for his profession than he has ever done before, and then carry the resolution into effect. May every member of every medical society resolve to assist diligently in carrying out the aims and the objects of the society with which he affiliates and then see to it that the resolution grows in force and power.

Great as is our calling, it can be made greater still. There is plenty for us all to do. As Edward E. Hale has said:

Look up and not down. Look forward and not back.
Look out and not in.
Lend a hand.

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EDITORIALS

THE DEFENSE OF MEDICAL RESEARCH BY ANIMAL EXPERIMENTATION.

The American Medical Association, through its Council on Defense of Medical Research, has recently issued five pamphlets which are intended for distribution to the medical profession and public with a view to disseminating knowledge concerning the value of animal experimentation in furthering the progress of medical science, as they are also intended to offset the ridiculous teachings of the antivivisectionists who, through their agitation, aim to, and in some instances have succeeded in having laws enacted to prevent animal experimentation.

Pamphlet No. 1 on "Vaccination and Its Relation to Animal Experimentation" is by J. Frank Schamberg, M.D., of Philadelphia. In this pamphlet the author discusses the history of vaccination and conclusively shows by statistics that it has been of immeasurable value in saving human life and suffering. Of particular interest are the tables showing the large death rate from smallpox in those countries not having compulsory vaccination as compared to the small death rate in the countries where general vaccination is enforced by law. Attention is also called to the prevalence of smallpox in the countries where vaccination is not generally practiced and the terrible slaughter which occasionally occurs in those countries due to epidemics of the disease. The immunity of vaccinated physicians, nurses and attendants in smallpox hospitals is duly commented upon, as also the so-called dangers of vaccination, which have been enormously exaggerated by opponents of the measure. For instance, it is shown that in the Philippine Islands, within the past few years, there have been performed by the United States sanitary authorities 3,515,000 vaccinations, without a single death or any serious postvaccinal infections. The author calls attention to the fact that vaccination has stood the test of over 100 years of experience, and has satisfied the judgment of physicians and scientists, and, in view of the

unanimity of authoritative information on vaccination, it seems strange that the measure should encounter organized opposition outside of the profession. There has probably never been in the history of man a greater discovery, and the efficacy of vaccination has repeatedly been affirmed by the most scientific bodies in the world. Our knowledge of smallpox and vaccination has come through the results obtained by animal experimentation.

The second pamphlet of the series is on "Animal Experimentation in Tuberculosis," by E. L. Trudeau, M.D., of Saranac Lake, N. Y. Dr. Trudeau very properly starts out with the statement that everything we know to-day of the etiology of tuberculosis, and everything that has a direct bearing on the prevention and control of the disease, we owe to animal experimentation. Before the infectious nature of the tubercle became established by animal experimentation no advance was made in the knowledge of tuberculosis in any direction except that of pathologic anatomy. The author takes up, in order, the etiology, histology, prophylaxis, diagnosis and therapy of the disease, and shows conclusively that in the development of all the knowledge of the disease animal experimentation has been of incalculable value. He also shows that further advance in the checking of the great white plague will of necessity depend upon the knowledge acquired by animal experimentation, and he very pertinently says: "New knowledge of tuberculosis, of such overwhelming importance to the human race, a knowledge which already gives the assurance that generations to come will not die of this disease to the extent former generations have died, is not too high a price to pay for the death of any number of guinea-pigs and rabbits. Are we to stop on the threshold of this newly acquired knowledge, and are the fruits of ultimate victory to be denied to humanity?"

Pamphlet No. 3 on "The Rôle of Animal Experimentation in the Diagnosis of Disease" is by M. J. Rosenau, of Washington, D. C. In this pamphlet the author says that we must recognize a disease before we can hope to prevent or cure it, and that the diagnosis, therefore, is of fundamental importance. Upon a correct diagnosis rests the entire structure of preventative and curative medicine. That we depend largely upon animal experimentation in order to make a positive diagnosis of many of the important diseases of both man and the lower animals is conclusively shown by referring to the knowledge of tuberculosis, typhoid fever, cholera, hydrophobia, plague, diphtheria, and septicemia and pyemia obtained through animal experimentation. It is

also shown that, while animal experimentation has not only been busy in preventing much suffering and saving many a human life, it has also been more active in the realm of the lower animals. Thus glanders, actinomyces or lumpy jaw, anthrax, tetanus, swine plague, chicken cholera, hog cholera, foot and mouth disease, etc., have been thoroughly studied and are now successfully treated, with the result of an enormous money saving as well as a saving of animal suffering through the results secured from animal experimentation.

The fourth pamphlet, by Dr. James Ewing, of New York City, concerns the results that have been secured and may be secured in the future through animal experimentation in connection with the study of cancer. It is pointed out that the rational cure of established cancer in man remains a problem for the future, but that by means of animal experimentation we may confidently hope to prevent the occurrence of some cancers, to bring others to a standstill, and greatly to reduce the incidents and mortality of this disease. "But from the standpoint of rational therapeutics the results of five years' work by the experimental methods overshadow those of 1,000 years preceding."

The fifth pamphlet on "The Ethics of Animal Experimentation" is by James Rowland Angell, head of the department of psychology of the University of Chicago. In this pamphlet the author points out that the trend of modern opinion among civilized people is unquestionably toward the more drastic opinion of the right of society to protect itself. He says: "Often the isolation of a patient suffering from a contagious disease may threaten to endanger his life, but the danger to the community from the failure to isolate him is adjudged of greater importance. And so at the risk of harm to the patient the community protects itself. How much more, then, for people who assent to the logic of this principle, and its moral justification, should the use of animals seem warranted when such use can be made contributory to the decrease of suffering, both human and animal. We harness the horse and force him to work for us, whether he likes it or not. We rob the cow of her calf that we may ourselves enjoy her milk. In like manner we rob the hen of her eggs and think no worse of ourselves for the larceny. And, finally, we wind up our tale of coercion by ruthless slaughter, for both sport and food, of both bird and beast, wild and domestic alike. With such customs in vogue, it is not strange that most persons should lend a willing ear to the defenders of properly controlled experiments on animals. To the man familiar

with the revolutionary advances in science and medicine which have originated in the experimental use of animals, this condemnation seems the last word of a pernicious insanity."

The selection of these authors to prepare a defense of research has been a wise one, and a judicious distribution of the five pamphlets enumerated will do much to educate the public and offset the pernicious teaching of those who would entirely suppress or greatly limit the invaluable work in the interests of humanity that is now being properly done through animal experimentation. The pamphlets will be sold by the American Medical Association at cost, or at 8 cents per copy for pamphlet No. 1, and 4 cents per copy for any one of Pamphlets 2, 3, 4 and 5. In quantities the price is much less. It is to be hoped that medical organizations, and institutions interested in medical research, will arrange for a general distribution of the pamphlets in localities and among people where they will do the most good.

In this connection it is proper to mention the good work in the defense of animal experimentation that is being done by certain publications, notably *Collier's Weekly*, which has been emphatic in its approval of results as accomplished by animal experimentation and particularly strong in its denunciation of the so-called antivivisectionists who are aiming to suppress the work. In the issue of January 22 *Collier's* has the following to say:

"Is England seeing a light? Some of our readers will remember the famous (or infamous) memorial erected at Battersea, London, to the brown dog that was used for experimental purposes in the laboratories of University College, London. Notwithstanding the protests of scientific men against the unwarranted implications, the town council of Battersea persisted in allowing it to remain. At last, however, that council has decided to remove the statue. Certain other facts are also significant as indicating a growing attitude on the part of the public against the antivivisection movement in England. The antivivisection posters which heretofore have been allowed in railway stations are now being eliminated. The Midland Railway refuses them; the Central London Railway got rid of them some time ago; Sir Edgar Speyer recently ordered the removal of all of them—seventy in all—from the stations of the London District Railway. Another straw is that the evidence of the Royal Commission on Vivisection, which has been published in full, is overwhelmingly against the 'antis.' Meantime the same tiresome old story of misrepresentation is being repeated in some parts of the

United States. In various states, including New York, where the contest is now noisy, the laws are at present sufficient to imprison for cruelty, and those who seek to change the laws wish to subject experiments in institutions, such as the Rockefeller Institute, to the judgment, not of Dr. Carrell or Dr. Flexner, but to that of a lay committee consisting of one policeman, one clergyman, and one cat-loving woman. If the spirit of sentimentality based on ignorance had ruled a few decades earlier, diphtheria, yellow fever, malaria, tetanus and meningitis would have kept all their former terror; the whole great science of bacteriology would never have been born; even the animals would have been cheated through the needless ravages of animal diseases now under control; surgery would have found its triumphs impossible. If a few highly-wrought sentimentalists could band together to spread before the public pictures of human beings, with special exhibits of the horrors of surgery, enforced by the back-stairs gossip of a few nurses, leaving out all consideration of necessity and results, and forgetting to mention anesthetics, some progress might be made toward subjecting surgery on human beings to a committee of enthusiastic and uninformed regulators. Horses are forced to drag heavy trucks over slippery pavements; millions of chickens are shipped crowded in boxes; calves are taken from their mourning mothers; flies, mice and spiders are slaughtered; the gypsy-moth is fought; but the agitation in favor of animals is only for the few which science uses. A kitten can be drowned, but not drugged and studied. Dr. Flexner used twenty-five monkeys and one hundred guinea-pigs—who all together suffered far less than one child with meningitis—and has already, as a result, changed the mortality in that dread disease from about 75 per cent. to about 25 per cent. The proposal is to have Dr. Flexner told just what he may do by a policeman and a lady."

It is unfortunate that we have not had more papers, such as *Collier's Weekly*, fearless in the expression of truth, not only publicly to uphold what scientists have been doing for humanity, but continually to spread the gospel and present convincing arguments to offset the pernicious teachings of such fanatics as those who stand sponsors for the antivivisectionist craze. We hope that the Council on Defense of Medical Research, representing the great American Medical Association, will make an effort to secure the cooperation of other papers as influential as *Collier's* in effecting proper settlement of this great

question which now threatens to interfere seriously with scientific progress and the saving of human life and suffering.

THE EMMANUEL MOVEMENT.

A most excellent résumé of this latest form of psychotherapy—if such it may be called—is that by Dr. John K. Mitchell in the December number of the *American Journal of the Medical Sciences*.

Like all conscientious physicians, Dr. Mitchell is perfectly willing to concede, in the beginning, that properly controlled and utilized by men of wide knowledge and good judgment, the Emmanuel movement has been, and is, capable of much good. All alert and observing doctors appreciate that oft-times the mind and the body must be treated simultaneously. But granting that such good has accrued, statistics are as yet too short-lived to prove any degree of permanency for the results.

As the author well remarks, our profession is just as sacred to us as is that of the clergy to it, and our ultimate purpose equally holy; so that it seems decidedly paradoxical that the physician submit to being called in by the clergyman, "Not to direct or even aid in the treatment of the case, but to relieve him (the clergyman) of some responsibility by settling whether the sufferer shall be turned over to the spiritual arm."

Public safety demands that the treatment of a patient, be it surgical, medical or psychic, should be in the charge of the physician. The broad conception of the doctor of medicine of to-day, eliminating as it does all questions of sect, lending its ear to all that is good and well-founded, cannot be accused of narrowness when demanding similar standards from a foreign profession aspiring to enter so responsible a field.

In considering the many knotty problems that confront the trained neurologist, the author well remarks that "it seems improbable, in these matters involving judgment of character, knowledge of men, and acquaintance with the tortuous workings of the neurotic mind, that a few lectures in a seminary course will enable the average divinity student to do better than his far longer study and more practical contact with men and minds will the medical graduate, assuming both equally equipped in the beginning with the necessary human comprehension and with the gift of sympathy in its best sense."

The question of the legal responsibility of the medical clergyman is one that as yet has not been passed upon. But that law would be obviously

unjust that would demand of the medical graduate a rigid examination for his license and allow the divinity student, without a medical training of any sort, perfect freedom to go forth to heal both soul and body if only he can persuade some deluded doctor to enter the case long enough to shoulder the responsibility and, if unsuccessful, the blame as well, even though the doctor has had nothing to say as to the conduct and treatment of the case.

While the Emmanuelists are at present kind enough to limit their field of therapy to so-called "functional" diseases, yet they are also willing to accept as functional many disorders which the careful clinician recognizes as assuredly organic. Strictly speaking, true functional diseases are decidedly rare; Mitchell expresses doubt as to the existence of any. As he says, pain in the stomach may be a functional disorder, but at its base there may be an anemia, hyperemia, hyperchlorhydria, etc. And the typical functional disorder of the nervous system, neurasthenia, otherwise known as nervous prostration, or breakdown, is probably due to a definite poison, the toxin of fatigue. Then, too, there occur often cases wherein lies a complication, perhaps, of an organic and a functional disturbance which baffle the diagnostic skill of the best clinicians, and yet these shallow bigots essay to treat them all through the mind, neglecting utterly the methods of physical diagnosis—one of the rudimentary and all-important branches of medical science.

As a matter of fact, the eminent Dr. Weir Mitchell declares that the cases of neurasthenia that are amenable to mental therapy alone are decidedly scarce, only three such occurring in eighteen months of his practice.

To an unbiased mind, it were much saner and safer to entrust the care of a seriously sick patient to one who would insist that all possible efforts toward discovering an underlying, organic disease be exhausted before a diagnosis of neurasthenia is resorted to, than to him who would immediately so classify all cases of rather marked "nervousness" and report their relief as cures of this obstinate malady.

If Dr. Worcester would demand of his critics an intimate working knowledge in the Emmanuel movement, is it not but just that the criticisms from his own ranks directed at doctors should come from years of hospital or private practice in medicine? The ablest and most experienced neurologists of our country, men who have followed their cases from their very beginning through a long period of their life history, recording relapses, making autopsies, giving equal weight to failures and successes—these men there

are by the score who stand ready to condemn and who have roundly assailed such superficial methods as are utilized by these pseudo-physicians of the body through the mind.

From an experience of twenty-two years in a branch of mental control at times recommended in Dr. Worcester's publications, viz., hypnotism, Dr. Mitchell does not hesitate to brand it as positively dangerous and demoralizing to the powers of self-control of him who surrenders himself to its baneful influence. He believes that it should be under legal control and only utilized by the best qualified medical man.

Like all other fads and cults, the Emmanuel movement doubtless is capable of rendering service in its proper limitations, but its wholesale application by unfit persons will, in the end, like Christian science, be productive of far greater harm than good. Not the least benefit accruing should be to physicians themselves in that they may be awakened to the necessity for a more thorough application by the medical profession, of the principles of true psychotherapy.

FEES AND THEIR COLLECTION.

According to recent report the Wells County Medical Society has adopted a revised fee bill, and in doing so raised the charge for ordinary visits to \$2. Previous to the adoption of the new fee bill, the charge for ordinary visits was \$1.50.

We congratulate the medical men of Wells County upon their decision to obtain better fees for the professional services rendered. Within the past few years the cost of living has practically doubled, and wages, salaries and most other incomes have correspondingly increased. Furthermore, the increased requirements for the practice of medicine have added to the cost of education and equipment, not counting the additional loss of time and income during student days. There is, therefore, no logical reason why medical men should not be paid larger fees than they received when the cost of everything was much lower. One thing is certain, and that is that medical men will never get more unless they charge more, and the economic conditions of the times fully warrant an increase in the revenue of every practitioner of medicine.

And while we are discussing this question of fees, it is not out of place to say that the doctor should collect what he charges and do it with reasonable promptness. There is no reason why statements should not be rendered on the first of every month and patrons given to understand that prompt payment is expected. In the cities

and towns wages and salaries are paid every week, every two weeks, or every month, and merchandise is usually sold for cash or on thirty days' time. People who thus receive their money promptly should not object when the physician, who is expected to pay his bills promptly, asks for early settlement of account for services rendered. In the country the farmer sells his product invariably for cash, and just now he is getting the highest price for his products that has been known for a generation. The farmer seldom, if ever, extends credit, and yet, through force of habit, he almost unvaryingly asks others to extend credit to him even when he does not need it. If he has a surplus he buys more land or more equipment and keeps the doctor and some others waiting for pay, not considering that the doctor needs money to pay for the very products which come from the farm and which usually have to be paid for at the time of purchase or thirty days later.

It is quite true that a certain amount of credit is essential to the life of trade, but there is a reasonable limit to credit, and the doctor from time immemorial has been altogether too lenient in extending credit and to his detriment. The true physician will always be charitable to the poor and lenient in his exaction of payment from the poor, but from those able to pay, the rule concerning credits as applying in other lines of work or trade, should apply in the settlement of accounts for professional services.

THE MEDICAL MAN AND HIS INVESTMENTS.

Medical men seldom, if ever, get rich or even well to do from the practice of medicine. Whenever you find one that has much more than his income you will usually find one who has inherited wealth, married wealth, or been exceedingly fortunate in investments that have rapidly increased in value. Occasionally a prudent and economical physician will accumulate a comfortable fortune from his income and the natural increase which comes from savings at the prevailing rates of interest, but he is the exception. More often the surplus earnings of the doctor, if he has any, are unwisely invested in various kinds of get-rich-quick enterprises, many of which are nothing more than pure swindling games of chance.

Physicians have always been classed among the most gullible, and are usually ready to fall victims to the snares of swindling concerns offering large returns. Promoters of various mining schemes which in reality will give no returns to

anyone but the promoters have found physicians an easy prey, and many a hard-working and intelligent physician would be several hundred or in some instances several thousand dollars better off had he never invested in these schemes. The promoters of companies for manufacturing purposes have also had their turn at the doctor, and too often these companies with no good reason for their existence, except to fatten the purse of the promoters, have gone into the hands of a receiver. If perchance the enterprise does show indication of being profitable, the promoters or the large stockholders manipulate the stock so that the small investor, including the doctor, loses his holdings. Too often the investment in companies organized by a promoter is a lottery with the chances nearly all in favor of drawing a blank.

The surplus earnings of the average physician are not great, and the question of their investment should be very carefully and seriously considered. Any proposition which seemingly offers quick returns and large earnings should be looked upon with suspicion. The man with small means had better confine his investments to enterprises that hold out no greater inducement than a reasonable return upon the money, and above everything else security for the investment.

There are many gilt-edged securities yielding a net return of from 5 to 6 per cent., and sometimes more. Among these are well-secured mortgages, certain bonds secured by mortgage, and stocks in established, well-managed and amply financed banks and industrial manufacturing concerns. But for the doctor who has little time or opportunity to investigate the character of investments offered him, we believe that the safest place for surplus earnings is in real estate in or near a growing city or town. Good productive farm property is a safe and profitable investment which will always yield a reasonable income, and offers the further advantage of slowly but certainly increasing in value. Good farm property will never be any cheaper, and with increase of population and a growing demand for farming land, there certainly will come an increase in the valuation. Within the last five years much of the good farming land in Indiana has increased 25 to 50 per cent. in value, and there is every reason to believe that there will be further increase within a few years.

There is another form of real estate investment that is bound to yield results, and that is the unimproved property well situated at the outskirts of substantial but growing cities and towns. Much of this property will yield results if held for an increase in value, will give better

returns if improved by the addition of economically built dwellings which can be rented at a modest rate. In nearly all growing towns there is a demand for houses that can be rented for comparatively small sums, and property of this kind often proves a very profitable investment, for the reason that the fixed charges, such as taxes, insurance and repairs, are low as compared to the rate of income received from the tenants. Improved business property often yields good returns, but there is always the uncertainty of the fixed charges which often are out of proportion to the income from rentals. Centrally located residence property, except in the form of well-located flats in prosperous cities, seldom proves profitable, as the fixed charges usually reduce the profits to a small return upon the investment.

Money invested in good farm property has the advantage of being secure and subject not only to a reasonable return in interest, but a steady increase in valuation. It is therefore a safe investment for the man of small means, and therefore well adapted to the surplus earnings of the average physician, who of necessity must be cautious in making investments.

EDITORIAL NOTES

THE JOURNAL should be notified by members of any desired change of address on the mailing list.

OUR advertisers are helping us to produce a larger and better journal than otherwise would be possible. As one of the owners of THE JOURNAL are you reciprocating by giving our advertisers your patronage? If not, why not?

POSTMASTERS are required by law to notify us when THE JOURNAL is not delivered and the reasons therefor, but members who do not receive their journals will add to their own interests and hasten matters by notifying us whenever THE JOURNAL is not received.

WE especially urge every reader of THE JOURNAL to send us news notes of general interest to the medical profession of Indiana. Newspaper clippings, giving name and date of paper, are solicited, as also personal items which may not have received newspaper notice. Information concerning deaths, marriages and removals are particularly acceptable.

UPON the efficiency of the secretary depends the life and progress of your county medical society. If the meetings are irregular, poorly attended and the programs uninteresting, it is quite probable that you have a secretary who lacks energy, enterprise and enthusiasm. If the meetings of your society are not reported in THE JOURNAL, or the county society directory information in THE JOURNAL is inaccurate, then ask your secretary for an accounting.

IN some communities the cost of meat and nearly everything else goes up, but the cost of medical services remains the same or less than twenty years ago. As an instance of the ridiculous cut-throat measures adopted by some so-called physicians to obtain "business," we need only mention a suit brought against some county commissioners by an Ohio doctor to enforce a contract calling for an average of 25 cents per visit, medicines included, for professional (?) services rendered the poor.

FORT WAYNE is promised a new \$100,000 hospital if the plans of Councilman Dr. B. Van Sweringen are carried out. A resolution asking for a special levy of 10 cents on the \$100 for the erection of the hospital has been passed by the council, and it is expected that an ordinance fixing this levy will be passed at a future meeting. Fort Wayne has long needed such a hospital, as the three large sectarian hospitals of the city are already taxed to their capacities with private cases and the city has for years abused the charity of these institutions.

THE recent road law decision by the Supreme Court of Indiana is cause for general rejoicing over the state, and is of special interest to physicians who of necessity must use the roads, whether good or bad, at all seasons of the year. The law authorizing the construction of gravel roads was at first held up by the Supreme Court, and the recent reversal of that decision will affect a wide range of territory where construction work was stopped pending a final settlement of the question. Many counties will at once resume the work of road building, and within a few months several hundred miles of new roads will be built, thus adding to the reputation of Indiana for the best roads in the central states.

EVERY member of the Indiana State Medical Association should be proud of the fact that he

belongs to such an enterprising and progressive medical organization. He should also congratulate himself upon the fact that he obtains so much benefit from the expenditure of the small sum of one dollar as annual dues to the Association. But he should be ashamed of himself if he becomes delinquent in the payment of his dues and thus deprives himself of all the benefits of membership, not the least of the benefits being the privilege of receiving *THE JOURNAL* regularly. Dues became delinquent on February 1, and we start out with a new mailing list on March 1. A word to the wise is sufficient.

A FEW years ago it was popular for municipalities to pass antisputting ordinances making it a punishable offense for any person to spit in a public conveyance, public building or on a sidewalk of a public highway. As might be expected, these ordinances have, in most localities, found company with a large number of other measures passed during a spasm of reform, and never enforced. There is not the slightest question of doubt but that the antisputting ordinance if enforced would result in immeasurable good, and it would be welcomed by all sensible people if it accomplished no other purpose than to put an end to the filthy and disgusting habit of spitting in public places; but as a matter of fact, sentiment is not strong enough as yet to bring about even a feeble enforcement of the measure. What the people need is more education and not more laws. No law is effective until public sentiment in general is in favor of the provisions of the law, and to pass the law before the people are educated as to the value of the law and its provisions is to pass a law that will be inoperative. The idea that spitting in public places must be legally prohibited because it carries with it the possibility of transmitting disease will meet with encouragement only after the people have been taught that diseases are often transmitted by expectoration. At present the enforcement of the act depends upon the verdict of the mass of people as to whether spitting in public places is sufficiently filthy to warrant prohibition by law. Unfortunately, sentiment in this direction is not very strong, or otherwise some such measure would have been passed and enforced long before the contagiousness of expectoration was recognized.

THIRTEEN state medical associations and two local medical societies now have cooperative defense against malpractice suits brought against their members. Six state associations are now seriously considering the adoption of the

medical defense feature, and two states, including Indiana, have appointed committees to thoroughly investigate the subject. It is reported that in all the states which have adopted the plan the success of the feature has been beyond expectation.

The Michigan State Medical Society has recently adopted a plan for medical defense, and we quote the *Bulletin* of the American Medical Association concerning it. The plan provides for:

1. An initial assessment of \$1.50 from each member of the state society for 1910.

2. An annual per capita assessment thereafter of \$1.00 per year.

3. A standing committee on medical defense, consisting of an executive board of five and one member from each county society, the executive board to be elected by the council for five years. The other members of the standing committee are to be elected by the county societies for one year. The chairman of the executive board, to be elected by the council of the state society for a term of one year, is to be the custodian of the defense fund. Any member of the state society not in arrears in his dues is entitled to the assistance of the committee when sued or threatened with suit for civil malpractice. Dues must be paid before June 1. No member is entitled to defense in a suit the cause of which arose while the member was in arrears. Two years' back liability is assumed for each member, providing suit was not threatened or begun before the member joined the society or before the defense plan was inaugurated. Suits brought against the estate of a deceased member will be defended. This is an important point which should be incorporated in all medical defense plans. The occasion for its application will probably arise but seldom, yet the value of protecting the estate of a deceased physician against such suits is evident. All attorneys' fees and court costs are to be paid from the defense fund, but damages found against any defendant will not be paid.

THE Michigan State Medical Society is not having clear sailing in efforts to establish and maintain medicolegal protection for its members in malpractice suits. In some of the counties the question has already been raised as to whether all members can claim the benefits of medicolegal defense in malpractice suits, and under what conditions the organization shall refuse to render such support. According to the by-laws governing this question, "the Executive Board shall engage by the year a competent firm as general

attorneys. Their duty shall be to file and compile from all available sources court decisions fixing the law of liability of physicians for civil malpractice, such compilations to be the property of the society; also to defend any member of the society not in arrears when sued or threatened with suit for civil malpractice, or to supervise such advice through a local attorney." A further section says: "The Medicolegal Committee shall undertake the defense of any member of the society sued or threatened with suit for civil malpractice, regardless of the time when the alleged cause of action arose, and shall also defend any action for civil malpractice against the estate of a deceased member."

According to this, *any* member of the state society ought to be entitled to all the privileges of any other member, and the plan of medical defense must be broad enough to cover every suit against any member, to be of practical value. If every member pays a certain amount each year on the understanding that he is to be afforded medicolegal protection in malpractice suits, he has every reason to expect that the society will fulfill its implied obligations.

We believe that eventually the state organizations that have adopted medical defense plans will come to grief in an attempt to live up to the obligations implied by the adoption of such provisions as made by the Michigan Society. The decision as to whether aid is to be offered or not, depending upon the merits of the case, will lead to disagreeable controversies if not legal entanglements, and even the question of the privilege of securing testimony from fellow-members of the Association has been questioned by attorneys.

Then, again, there is the ethical side to be considered. Is it right to take from our erring brother dues intended to supply him with medicolegal defense and then refuse to grant him this defense when he gets into trouble, or, on the other hand, is it good policy to attempt to defend a member who is virtually guilty as charged, and how shall unpleasant contentions be avoided in attempts to draw the line?

It is admitted that organization for mutual protection is permissible and commendable, but there must be certain restrictions in the operation of medical defense by medical societies if we are to avoid the charge that we are defending claims whether just or unjust.

There are many questions which it would be well for state associations to consider before blindly accepting a plan of medical defense for its members. Presumably those societies that have adopted medical defense plans have carefully and thoroughly considered the question in

all its phases before taking decisive action, and yet the plan recently adopted by the Michigan State Medical Society seems to be deficient in some provisions which it seems to us are of the utmost importance from an ethical and economic standpoint.

DR. CHARLES A. L. REED, ex-President of the American Medical Association, after serving seven years as the Chairman of the Committee on Medical Legislation of the A. M. A., has tendered his resignation to the Committee, and in doing so has the following to say concerning the work that has been accomplished by the medical profession:

"I must ask for the privilege of tendering a few final words before I can accept exemption from further sacrifices incident to relations that I have sustained with pleasurable devotion for the last seven years. During that time, by virtue of its splendid organization, the medical profession has been able to assist in the accomplishment of important reforms. Among these reforms may be mentioned the improved status of the medical profession in the governmental organization of the Isthmian Canal Zone, the reorganization of the Army Medical Corps, the passage of the Pure Food and Drugs Act, the recognition by the government of the heroic services of physicians, the defeat and resulting retirement from office of important personages whose influence was inimical to the welfare of the people along lines represented by the medical profession, the promotion of a sentiment in behalf of state licensure in medicine and the preparation of a model act to that end, the education of the public on questions of medical legislation, the development of a strong public demand for the creation of a broader and stronger national public health service, and, finally, the development of an organization by which the influence of the entire medical profession can be brought to bear on great questions of legislation and public policy.

"It is to be remembered, however, that all great reforms have been and must be effected to the embarrassment, if not actual injury, of unworthy interests that are thereby prompted to efforts at retaliation. Such efforts are in progress at the present time. Unworthy and discredited manufacturers of impure, adulterated and misbranded foods, fraudulent drugs and spurious liquors are to-day conspiring with certain equally unworthy and discredited members of the profession to blacken the character of its honored leaders, and thereby disintegrate its organization. The paid representatives in Congress of selfish and sinister enterprises, the jealously ambitious members of the public services outside of the medical profes-

sion, together with the ignorant and venal pretenders in medicine, are endeavoring to break down the reforms by which they have been adversely affected. In this way the Pure Food and Drugs Act is being insidiously annulled by vicious interpretations that are foreign to the purposes of the people and the Congress in enacting the measure. An effort is being made to resubordinate the medical service in the Isthmian Canal Zone to authority that has no technical qualification for the supervision of its functions. Discredited officials are endeavoring to re-establish their power. Ignorance and superculture, allied under the guise of eults, are endeavoring to break down the medical practice acts of the states. Mercenary and merciless enterprises, antagonistic to the welfare of the people, are conspiring to defeat the movement for a national department of public health.

"To overcome these antagonisms, to maintain the reforms already realized, and to accomplish other reforms, the necessities for which are flagrantly apparent in our national life, is to-day the first obligation of the medical profession both to the people and itself. Its natural guardianship of the public cannot be ignored or evaded. It can discharge that duty only by an intelligent *esprit du corps* made effective through the instrumentality of far-reaching, well-disciplined and courageous organization. To this end the officers and committeemen of our national body should be unstintingly supported in their altruistic work; the state associations should be strengthened; but, above all, the county societies, the units of strength and efficiency, should exemplify in the highest degree the principles of complete organization and disciplined cooperation.

"After a consensus has been reached on any question in any county, every member should become the teacher of the public on that question in his respective locality. The public intelligence thus enlightened, public conviction may find expression in public action, if need be at the polls. The medical profession must carry weight, not only by the wisdom of its councils, but by its actual power with the people as the natural conservator of their physical welfare and their normal efficiency. In the exercise of its prerogatives, the county medical societies should hold open meetings to which the public are invited and before which questions of profound general concern should be discussed and appropriate action taken. These questions should pertain to every phase of protection against disease-producing influences in water, food, habitation and personal hygiene. The whole agitation, while not disregarding the defense of existing reforms, should, however, be largely concentrated in the immediate

future in behalf of action by the Congress to establish an improved national public health service—a measure which, in every form of practical legislation, I am authorized to state, has the cordial support of President Taft.

"With deepest gratitude that I have been permitted to act as an humble servitor of my profession in carrying out some of these reforms and with assurance that nothing but the inexorable demands of my practice and of my obligations in life could induce me to relinquish the work yet to be done by and through the matchless organization of the American Medical Association, I am

"Very Sincerely,

"CHARLES A. L. REED."

DEATHS

DR. R. H. CROWDER, of Sullivan; a veteran of the Civil War and a well-known practitioner; died January 22, of paralysis.

DR. FRANK E. STIPP, aged 38, died January 4, after a long illness. Dr. Stipp was secretary of the county board of health and a brother of ex-Mayor Stipp.

DR. WILLIAM I. STARK, aged 52, of Terre Haute, Ind., was instantly killed in a collision between a passenger train of the Vandalia system and a street car in Terre Haute, December 15.

DR. WILLIAM WALLACE WICKHAM (Washington University, St. Louis, 1856); a surgeon in the Federal service during the Civil War; for many years a practitioner of South Bend, Ind.; died at the home of his daughter in Crawfordsville, Ind., December 21, from senile debility, aged 89.

DR. THOMAS J. SHAW died January 21 at his home in Chicago at the age of 68 years. Dr. Shaw was born in Kingsbury, Ind., July 20, 1841, and attended the Valparaiso, Ind., college. For a time he was hospital steward of the Indiana state prison. He went to Chicago in 1877, graduating from Rush Medical College in 1880.

DR. JOHN D. CHAMBERS, aged 65 years, one of the pioneer practitioners of Fort Wayne, was found dead seated in his office chair with an open

book in his hand, January 12. Dr. Chambers was born at Alabama, New York, 1845, coming to Macon, Mich., at 3 years of age. Thirty-five years ago he came to Fort Wayne, where he resided until his death.

DR. ZACHARIAS CARNES (University of Louisville, 1877); a member of the Indiana State Medical Association; a veteran of the Civil War; at one time president of the Johnson County Medical Society; for twenty years local surgeon of the Pennsylvania system, and for many years a member of the school board; died at his home in Greenwood, January 10, from tuberculosis, aged 71. He was born in Kentucky, within a few miles of Lincoln's birthplace.

NEWS, NOTES AND COMMENTS

DR. N. A. KREMER has recently been reelected county health commissioner.

DR. CLAY A. BALL, Muncie, was operated on for appendicitis December 18.

DR. W. I. SCOTT has been reappointed health commissioner of Howard County.

DR. H. A. VANOSDEL has opened up an office in 307 Board of Trade Building, Indianapolis.

DR. S. G. HOLLINGSWORTH has returned from Florida and again taken up his practice in Brazil.

DR. WARREN S. WILLIAMS has been appointed local surgeon for the T. and C. I. Railroad at Kendallville.

DR. CHARLES E. STONE, Shoals, has been recently reappointed county health commissioner of Martin County.

DR. NOAH WEBSTER CLARK and Miss Rose Catherine Cline were united in marriage Saturday, Dec. 25, 1909.

DR. C. E. SOURWINE, of Brazil, has been elected health commissioner for Clay County for the following four years.

DR. G. B. JACKSON has moved his office to 310 Pennway Building Indianapolis, being associated with Dr. Thomas Eastman.

DR. J. C. WALLACE, of Fort Wayne, has recently changed his office location to the People's Trust Building, rooms 304 and 305.

DR. J. A. LEAS, formerly interne at the Protestant Deaconess Hospital, has opened up office at 325 Board of Trade Building, Indianapolis.

DR. EUGENE B. MUMFORD, in connection with Dr. T. Victor Keene, has taken up the management of the Indiana Pasteur Institute of Indianapolis.

DR. CHARLES ROTHSCHILD, of Fort Wayne, who has been spending the past year in Vienna doing post-graduate work, is expected home within a few weeks.

DR. M. JOSEPH COOMES, retiring president of the Ripley County Medical Society, has been appointed one of the Health Commissioners of the city of Batesville.

DR. DAVID DOMB, an interne at the Indianapolis City Dispensary, has resigned on account of ill health. He has opened an office at 632 Madison Avenue, Indianapolis.

DR. W. G. SWANK has recently been appointed secretary of the Crawfordsville Board of Health for the term of four years. Dr. Swank was for two terms health officer of Montgomery County.

DR. WILFRID HAUGHEY, 15 East Main Street, Battle Creek, Mich., was elected secretary of the Michigan State Medical Society and editor of the *Journal of the Michigan State Medical Society*, Jan. 13, 1910.

THE Montgomery County Teachers' Association, in session at Crawfordsville, in January, passed a resolution urging the next legislature to give the whole state a compulsory medical inspection law.

DR. FRANK A. MORRISON has been elected president of the School Board of Indianapolis. Dr. Morrison is instituting reforms on the letting of contracts which will save the city of Indianapolis large sums of money.

DR. AND MRS. G. S. ROW, of Indianapolis, have the sympathy of the profession on account of the unfortunate death of their 3-year-old daughter, which occurred January 5, from drinking an ounce of carbolic acid.

DR. L. M. DUNNING, of Indianapolis, has taken offices with Dr. O. G. Pfaff, 333 Newton Claypool Building. Dr. Dunning is a son of the late Dr. L. H. Dunning, formerly Professor of Gynecology, Medical College of Indiana.

A NUMBER of physicians of Evansville have organized the Evansville Anatomical Society with the object of the study of practical anatomy. Drs. Walter R. Cleveland, Henry C. Knapp and Eugene C. Taylor have been elected directors.

DR. J. L. PUCKETT, the newly elected mayor of Kokomo, has appointed three physicians to serve on the Board of Health and Charities. The board organized is as follows: Drs. W. H. McClurg, president; Will J. Martin, secretary; J. H. Carnelly, treasurer.

DR. STEPHEN J. YOUNG, of Terre Haute, slipped on the icy sidewalk in front of his home January 21, falling with such force that he broke his left thigh. The fracture was reduced, and it is thought that he will recover in spite of his advanced age.

THE new city administration of Brazil has recently appointed Drs. J. F. Smith, J. A. Rawley and J. D. Sourwine to positions on the city board of health. At its first meeting the board elected Dr. Harry Elliott to the office of city health commissioner.

THE directors of the Protestant Deaconess Hospital of Indianapolis are considering the purchase of the property immediately north of the hospital, formerly occupied by the State Medical College. If this is successful, it will almost double the capacity of the Deaconess Hospital.

DR. ZACHARIAH CARNES, of Greenwood, died on January 10. Dr. Carnes was past 70 years old and has been one of the leading medical practitioners of Johnson County and of Greenwood since 1877. His two sons, Drs. Henry G. Carnes and Will C. Carnes are practicing medicine at Atlanta, Ga.

NATIONAL interest has been aroused by the benzoate of soda trial in Indianapolis during the month of January. Some of the leading chemists of the United States have testified before Commissioner Daniels as to the effect of benzoate of soda on the human system. So far no decision has been reached.

DR. WILLIAM T. GOTT, Crawfordsville, secretary of the State Board of Medical Registration and Examination, announces that reciprocal relations as regarding physicians' licenses have been established between Indiana and New York, subject to the rules and regulations of reciprocity between the medical boards.

DR. JEWETT V. REED has been appointed superintendent of the City Dispensary of Indianapolis, vice Dr. Walter Christie, resigned. This dispensary is run under the management of the Indiana University School of Medicine, one-half of the expenses being paid by the city of Indianapolis and the other half by the college.

THE State Board of Medical Examiners and Registration met in Indianapolis January 11, and organized by the election of the following officers: President, Dr. James M. Dinnen, Fort Wayne; vice-president, Dr. Solomon G. Smeiser, Shirley; secretary, Dr. William T. Gott, Crawfordsville, and treasurer, Dr. Moses S. Canfield, Frankfort.

DR. EUGENE BUEHLER, the Indianapolis city sanitarian, has resigned, his resignation to take effect at the pleasure of the Board of Health. Dr. Ira E. Dunlavy and Dr. M. J. Spencer are candidates for this position. It has been suggested

that the Indianapolis Medical Society select the city sanitarian as the most effectual method of keeping the position out of politics.

BEGINNING with the January, 1910, issue, the old-established *Medical Review of Reviews* is edited by Dr. William J. Robinson, editor and founder of the *Critic and Guide*, *Therapeutic Medicine* and the *American Journal of Urology*. The editorial offices of the *Medical Review of Reviews* have been removed to 12 Mt. Morris Park W., New York City.

THE Protective Association of Physicians and Surgeons has been incorporated in Indianapolis, with a capital stock of \$10,000. The officers of the organization are: President, Dr. Frederiek A. Tucker, Noblesville; vice-presidents, Drs. Charles H. Emery, Bedford, and Thomas F. Spink, Washington; secretary and general manager, Fred I. Mills, Robinson, Ill., and treasurer, Dr. J. A. Garrettson, Indianapolis.

AT the annual meeting of the Board of Trustees of the Methodist Hospital (Indianapolis) plans were approved for an addition four stories high, providing for seventy additional beds and costing complete \$130,000. About one-third of this amount is already subscribed, and it is intended at the close of the canvass for subscriptions to provide a banquet of one hundred plates at one thousand (\$1,000) dollars per plate. Eleven plates have already been taken for this banquet. Action was also taken toward instituting a Deaconess Training School. The following officers were elected: President, W. C. Vanarsdel; vice-president, John N. Carey; recording secretary, Joshua Stansfield; corresponding secretary, D. M. Wood; treasurer, L. A. Robertson; superintendent of the hospital, Dr. W. T. Graham.

THE third annual meeting of the Indiana Sanitary and Water Supply Association will convene in Indianapolis on February 25. Papers will be read on the general question of water-works problems and sewage disposal by the following: D. H. Maury, president of the Illinois Water Supply Association; Dr. Edward Bartow, member of the State Water Survey of Illinois; J. W. Alvord, consulting engineer of Chicago; Mr. Meyer, head of the Wisconsin Public Service Commission; George W. Fuller and G. W. Johnson, both consulting engineers, New York; C. A. Brown of the

American Steel and Wire Company, Chicago; B. R. Richards, state chemist, Ohio, and R. L. Sackett, Purdue University. The officers of the Indiana organization are: President, Dr. H. E. Barnard; vice-presidents, Dow R. Gwinn, of Terre Haute; Howard A. Dill, of Richmond; B. F. VonBehren, of Evansville; Quineie Walling, of Muncie, and Severance Burrage of Lafayette; secretary, Frank C. Gordon, of Indianapolis; treasurer, George A. Fletcher, of Brazil.

THE Society of Medical History of Chicago has been recently organized, with Dr. Isaac N. Danforth as president; Dr. N. S. Davis as vice-president, and Dr. George H. Weaver as secretary. Its council consists of Drs. Ludvig Hektoen, George H. Weaver, John Edwin Rhodes, N. S. Davis, Henry T. Byford and George Henry Cleveland. Dr. Howard A. Kelly, of Baltimore, delivered the address at the first meeting, which occurred on the evening of February 19.

The society has been formed for the purpose of systematically collecting and permanently preserving in an accessible manner any matters which are or will become of interest in connection with the medical history of institutions, organizations and individuals, especially of Chicago and the surrounding states. The society asks the active support and help of the profession in its efforts to secure the desired materials. It makes a special appeal to those outside of Chicago for anything antedating the Chicago fire. It will gladly cooperate with other organizations operating in similar lines. Gifts to the society will be duly credited to the donors. All communications should be sent to Dr. George H. Weaver, Secretary, 1743 W. Harrison Street, Chicago.

THE American School Hygiene Association will meet in Indianapolis on March 2, 1910, for a three days' session. Lectures will be delivered at this convention by physicians and educators who have made school hygiene a special study. The meeting is open to the public, and should be well attended on account of the excellent program which follows:

WEDNESDAY, MARCH 2.

Evening Session, 8 o'clock.

(All sections. Joint session.)

"Health and Education," Thomas Harrington, M.D., director department of school hygiene, Boston city schools, representing the department of superintendents.

(Subject to be announced), John H. Musser, M.D., professor of clinical medicine, University of Pennsylvania.

"The Health of the Teacher," Luther H. Gulick, M.D., director department of child hygiene, Russell Sage Foundation, representing American Physical Education Association.

"The Principles Underlying Modern Physical Education," Prof. Herman H. Horn, professor of education, New York University, representing Public Schools Physical Training Society.

THURSDAY, MARCH 3.

Morning Session.

(Subject to be announced), M. G. Braumbaugh, Ph.D., LL.D., superintendent of schools, Philadelphia, Pa., representing the Public Schools Physical Training Society.

"The Teaching of Physical Education and Hygiene in American Colleges," George Meylan, M.D., adjunct professor of physical education, Columbia University, representing American Physical Education Association.

"The Right Standards of School Hygiene and the Hindrances to Meeting Them," Homer H. Seerley, president Iowa State Teachers' College, representing American School Hygiene Association.

AFTERNOON SESSION.

Section A.

Public School Physical Training Society.

President's address, "Folk Dancing," C. Ward Crampton, M.D.

"German Gymnastics Adapted to American High School Conditions," A. E. Kindervater, director of physical training, St. Louis.

"The Educative Value of the Child's Recreative Life and Systematic Provision for It," George W. Ehler, Public Schools Athletic League, Baltimore.

"The Methods Applied to the Physical Training of the Abnormal Children in the Public Schools of Milwaukee," George Wittich, director of physical education, public schools.

"The Needs of Physical Training in Schools for the Deaf," Robert L. Erd.

Section B.

"Fundamental Education," Clark W. Hetherington, professor of physical education, University of Missouri.

"Teaching on the Basis of Nascent Instincts," C. Ward Crampton, M.D., director of physical training, New York city schools.

"Racial Hygiene in Relation to Vigor," W. W. Hastings, Ph.D., editor of Hygiene and Physical Education.

"Shall Organized Play be Made a Regular Part of the Public School Curriculum?" G. W. A. Luckey, professor of education, University of Nebraska.

Section C.

Address of the president, John H. Musser, M.D., professor of clinical medicine, University of Pennsylvania.

"Relation Between Physical Defects and School Progress," Leonard P. Ayres, associate director department of child hygiene, Russell Sage Foundation.

"The Relation of the State to the Child," C. O. Probst, M.D., secretary Ohio State Board of Health.

"Experience in Indiana in Trying to Secure Hygienic Schoolhouses," John N. Hurty, M.D., secretary Indiana State Board Health.

Joint meeting; evening session.

"School Hygiene in the Training of Teachers: the Organizing Principle," W. S. Small, principal Eastern High School, Washington, D. C. (A. S. H. A.)

Subject to be announced, Dudley A. Sargent, M.D., director of physical education, Washington, D. C. (A. S. H. A.)

(a) "New Principles in the Teaching of Hygiene,"

(b) "The Teaching of Sex Hygiene," C. Ward Crampton, M. D., director of physical training, New York City public schools. (P. S. P. T. S.)

FRIDAY, MARCH 4.

Morning Session.

(Joint Meeting.)

"Extension Work in Physical Training in the Elementary Public Schools," William G. Stecher, G.C., director of physical education in public schools, Philadelphia. (P. S. P. T. S.)

"Adolescent Changes in Heart Rate and Blood Pressure," James H. McCurdy, M.D., editor *Physical Education Review*. (A. P. E. A.)

"Which Is Man's Life; His Work or His Play?" Woods Hutchinson, M.D. (A. S. H. A.)

Afternoon Session.

Report of committees.

"Status of Instruction in Hygiene in American Educational Institutions." (a) "Instruction in Hygiene in Colleges and Universities," George L. Meylan, M.D., chairman. (b) "Report on Health Instruction in American Public Secondary Schools," Luther H. Gulick, M.D., secretary.

"Status of Medical Inspection in America," John H. Cronin, M.D., chairman.

Business meeting.

Meeting of the Association.

Meeting of new council.

Meeting of new executive committee.

SOCIETY PROCEEDINGS

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of Dec. 7, 1909.)

Society met in regular session in the Assembly Room, with sixty-six members present. Meeting called to order by President Bruggeman.

Clinical case reports. Dr. G. W. McCaskey reported case in which diagnosis of brain tumor was made, but on exploration nothing was found. Physician, aged 67 years, perfectly healthy until about ten weeks previous, when he noticed dropping of right toes. Six weeks after first symptom found he could not use foot, and two weeks later there was weakness in right arm. Still two weeks later right arm was completely paralyzed. No sensory disturbance. Right side of face slightly parietic. No choked disc and pupils normal. No head pain or speech disturbance until five days before coming to hospital; then had pain over left frontal region. Mental faculties good. Was very emotional; would forget words, but did not utter wrong words. Brain tumor considered doubtful, but exploratory operation was advised and accepted. Operation disclosed nothing but localized meningitis. Dr. McCaskey thinks

nothing but autopsy will disclose where growth is located. Prognosis hopeless. Discussion by Drs. Porter, W. D. Calvin and B. Van Sweringen.

Dr. Rosenthal reported a case with head lesion which had been trephined. When seen there was disturbance in speech and gait. In left Rolandic area about arm center was the trephine wound. Dr. Rosenthal opened soft tissues, released dura and found the brain pulsating under the dura. Split dura, making decompression operation, and replaced soft parts. Since second operation speech has improved, and symptoms of progressing dementia have cleared up. Thickened dura probably caused symptoms.

Dr. Duemling reported case of a woman aged 45. Five or six years ago, during obstetric operation, entire urethra was torn out. Was absolutely no sphincter. Patient also presented large mass of prolapsed uterus, rectum, etc. Dr. Duemling performed Kelly's operation eight days ago for restoring urethra, and removed prolapsed uterus. Since operation woman has been dry, while before she was constantly wet.

Dr. G. L. Greenawalt read a paper on "Notes on European Hospitals, Clinics, Institutions, Etc." The author gave an interesting description of the ship hospitals, describing the care of sick, emigrants, deportees, etc., and giving the personnel of medical and surgical officers. He spoke of the hospitals at Florence, the Pasteur laboratory, photo-therapeutic laboratory and foundling home. The clinics of Drs. Burei and Resinelli were mentioned, as also the use of stovaine as an anesthetic. Dr. Kocher's work and clinic at Berne were described. He also mentioned the Vienna clinics, and the privileges enjoyed in studying pathology and diagnosis here; Berlin and the clinics of Oldhausen and Bier; St. Bartholomew Hospital, London, with short descriptions of Edinburgh, Glasgow and Dublin colleges; Paris, Hotel Dieu and Hospital Necker, with reference to work of Dieulafoy, Reclus, Allouans, Heitz Boyer and their assistants in clinics. The author compared American work and teaching with the methods met abroad.

Dr. A. E. Fauve read a paper on "Hospitals in Paris," in which he gave a general description of the hospitals, both public and private. He described briefly some of the more important clinics which he attended. The author called particular attention to the hospitals for the aged, which are up-to-date in every respect.

Election of officers resulted as follows: President, C. E. Barnett; vice-president, Alfred Kane; secretary, J. C. Wallace; treasurer, W. P. Whery; censor, E. J. McOsear; delegates, Drs. M. F. Porter and Chas. R. Dancer; alternates, Drs. Chas. G. Beall and J. H. Gilpin.

Board of censors reported favorably on applications of Drs. I. W. Ditton, Albert Stoler and Norma B. Elles, and they were admitted to membership in society.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Dec. 14, 1909.)

Society met in regular session at Hope Hospital, with thirty-one members present. Minutes of previous meeting read and approved.

Clinical cases. Dr. Porter reported the following case: Man, aged 57, entered hospital November 29. Family history negative. He had typhoid fever, and lung fever four times. Had several attacks of pain in gall-bladder region, and in addition pain in region of appendix. Had been quite ill for about a month prior to admittance to hospital. Diagnosis of gall-stones and

appendicitis with peritonitis made. Operation: Cholecystotomy—handful of stones taken out, and in the peritoneum found material like thin bile. Appendix removed; had three enteroliths in it, besides having evidence of chronic inflammation, and also evidence of recent acute infection. Did nicely for seven days following operation, when patient had pain in region of the sigmoid, with distress in epigastric region and some vomiting. Left radial pulse hard to get. December 3, 4, 5, 6, and 8, pulse normal; on the 9th pulse rapid. On the 10th and 11th could get pulse in the left wrist but not in the right. Two days after this had relapse and began to have trouble with vision. December 14 counted fingers. No heart murmur. December 13, Dr. Sweringen found accentuation of second sound of heart. Urine negative. Dr. Porter thinks man had temporary closure of left radial artery from embolus, and that as this grew better, right embolus followed. Dr. Porter asked for aid in diagnosis of the condition.

Dr. Beall said he thought this man had an old endocarditis forming these emboli. Thinks the pain in the sigmoid region might have been embolic process. Thinks a blood culture would assist.

Dr. B. Van Sweringen thinks the disease is a general arteriosclerosis.

Dr. Rhamy said a simple way to differentiate between general arteriosclerosis and blood infection would be blood count.

Dr. Wheelock said ophthalmoscopic examination would settle question of blindness. The temporary blindness would indicate that lateral branch of arteries were involved.

Dr. Weaver said that typhoid infection of the gall-bladder is very frequent. The gall-stones show that he has had chronic infection. Vidal should be made.

Closed by Dr. Porter.

Dr. Wheelock presented a man who had been presented before the meeting of the Twelfth District Society with growth in orbit, which it was thought might prove malignant. On being removed by Dr. Wheelock it proved to be simple inflammatory hypertrophy of the lachrymal gland.

Dr. Wheelock also reported an advanced case of mastoid trouble in a woman aged 37. Operation. Cleaned out whole mastoid, leaving only a shell. Fifth day after operation had chill and temperature rose to 104 4/5. No pain. Temperature gradually receded to normal and remained down until the tenth day. Dizziness developed on the eighth day after calomel had begun to work, and there was present some lateral nystagmus. At that time thought there was some disturbance of semi-circular canals. Dizziness and nystagmus disappeared in two or three days. On eleventh day temperature again rose, and she had stiffness and pain in back of neck. On removing dressing found pus greenish in character. Pain extended to temporal region. December 13 patient passed into muttering delirium. Mastoid abscess had been neglected too long.

Dr. G. W. McCaskey presented a case of splachnoplethosis. Patient, woman, aged 49 years, complained of nervousness, stomach and bowel trouble. Symptoms began ten years ago with nervous break down, and indigestion, with which she has been troubled more or less ever since. Most troublesome symptom was a persistent nervous sensation in the lower abdomen. Dr. McCaskey inflated stomach and demonstrated its size and position, which was below the navel, though empty. Kidney slightly prolapsed.

Dr. McCaskey also presented case of chronic myocarditis and arteriosclerosis. Patient, man, aged 52

years. Symptoms began four years ago with impaired eyesight, having several attacks of transient hemiplegia, and complete aphasia of third sense. Heart action extremely irregular and extra systole following nearly every contraction of ventricle. Patient had lost 70 pounds in four years. High blood pressure stage had passed away; at present is about 140. He had not been able to lie down for five months. Has improved much in two weeks of rest in bed with other treatment.

Dr. Weaver reported two cases illustrating operative treatment of compound comminuted fractures. Case 1, fracture through the symphysis of the lower jaw. Enlarged wound and wired fragments. Case 2 showed skiagram of result of operative treatment of compound comminuted fracture of leg. Dr. Weaver said he thought we were coming more and more to operative treatment of fracture.

Dr. L. E. Brown was granted withdrawal card.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Dec. 21, 1909.)

Society met in regular session in Assembly Room, with eighteen members present.

Clinical case reports. Dr. Porter reported case, male, 57 years of age. One week prior to seeing case patient took sick with symptoms of acute appendicitis, later developing symptoms of gall-stones. Examination showed tenderness in region of gall-bladder and appendix. Pulse rapid, compressible. Operation showed widespread peritonitis with fluid resembling thin bile; extensive cholecystitis. About 100 almost pure cholesterol stones removed, and wound drained freely. Appendix subacutely affected from which his peritonitis probably developed. Did well until seventh day when he had relative absence of pulse in left wrist; pain over sigmoid—no tenderness nor hardness—disappeared in several hours. An hour or so later had pain in epigastrium, with vomiting. Pulse 140 to 150. Enema produced copious movement, of normal color and partially formed. Pain subsided, and in two or three days had a relapse, but no rise in temperature. After a time had second relapse with rise of temperature, vomiting, hicough, and pulse absent in right wrist, but left O. K.; partial blindness and mental change characterized by mild delirium. Blood culture negative. Urinalysis negative. Post-mortem not held. Man died twenty-first day after operation. Condition best accounted for by endocarditis, accompanied by emboli.

Dr. Wheelock said ophthalmoscopic examination revealed no emboli, but fundus looked edematous.

Discussion by Drs. Rhamy and Porter.

Dr. Rawles reported case of twin pregnancy. Discussion by Dr. Budd Van Sweringen, who also reported his first case of twin labor. He exhibited a fetus found in tube following rupture. Was one of the youngest fetuses he has seen, the woman being operated three weeks from the date of her expected period.

Dr. Wheelock presented cases demonstrating epileptiform seizures resulting from middle ear disease. Case 1. Epilepsy due to middle ear disease. Case 2. Anterior and posterior movements of head due to mechanical pressure on semicircular canal following otitis media. Case 3, general anemia producing labyrinthine symptoms. Case 4, aural epilepsy. Case 5, Ménière's disease, apoplectic form.

Discussion by Drs. Duemling and Barnett.

Dr. Wilking reported case of cancer. In third generation of this man's family there were nine cases of cancer.

Discussion by Drs. Porter, Weaver, Rhamy, Duemling, and Wheelock.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Jan. 4, 1910.)

Society met in regular session in Assembly Room, with twenty-one members present.

Clinical case reports. Dr. Porter made preliminary report relating to injection of boiling water for cure of goiter. He said that it has been demonstrated on dogs that the thyroid can be made to entirely disappear without a scar or symptoms as result of loss of thyroid. It has also been proven by experiments on dogs that goiter can be made to disappear. This method of treating goiter is of service in two classes of cases (1), those so far advanced that it is extremely dangerous to operate, and (2) those cases relieved by long rest in bed, i. e., mild cases. Method is practically painless and can be used while patient attends to regular work. Can be done without producing hyperthyroidism. Dr. Porter says the injection of hot water is not original with him, but its application to cases of hyperthyroidism.

Discussion by Drs. Barnett, B. Van Sweringen, McOscar, Drayer, McCaskey and Weaver.

Dr. McCaskey gave an offhand talk on the "Clinical Application of the Laws of Immunity and Bacteriotherapy," in which he said that immunity is resistance against disease, and is a condition of the body resulting from the action of organisms to organisms, which may be either active or passive. We are born with immunity in the body. Immunity is active when certain substances are introduced that stimulate the organism to resist invasion of bacteria. He also spoke on opsonins, antitoxin and toxins. He said antistreptococci serum is of value and gave case reports to prove assertion.

Discussion by Drs. Bruggeman, Weaver, B. Van Sweringen and Beall. Closed by Dr. McCaskey.

Report of treasurer and secretary read and referred to auditing committee composed of Drs. Bulson, Porter and McOscar. Dr. L. L. Culp of Fort Totten, North Dakota, was granted a withdrawal card.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Jan. 25, 1910.)

Society called to order at Lutheran Hospital by Vice-president Kane, with fifteen members present. Regular program in charge of Drs. Drayer and Duemling. Dr. Drayer presented the following cases:

CASE 1.—Baby with cyst under left lower jaw; was born with this swelling, and it is the same size as at birth. Light transmitted through it. Presented for diagnosis and suggestions as to treatment.

CASE 2.—Baby born four weeks ago; low forceps delivery; normal position. Soon after birth noticed baby did not use left arm as well as right. Paralysis has gradually been getting better. Dr. Drayer said if it is Erb's palsy it does not involve entire brachial plexus. A few lumps have appeared on neck at site of forceps blade. Complete paralysis up to one week ago, but is now beginning to recover without treatment. This has lasted longer than the usual pressure palsy. Case presented for the reason that it is not an Erb's palsy.

CASE 3.—Melena neonatorum. At 48 hours old baby bled from stomach and bowels, continuing for 36 hours. and was thought dead two or three times. Up to 72 hours hemorrhages persisted every six hours, the baby

vomiting an ounce of blood at a time; stools giving blood reaction. Gelatin injections were given, and diphtheria antitoxin 3 c.c.; since which time baby has had only one hemorrhage, three hours after injection. Melena neonatorum is extremely rare, and occurs within the first four days of life. Three types observed, (1) the spurious, in which hemorrhage comes some distance from gastrointestinal tract, as from syphilitic lesion in nose or trauma; (2) symptomatic type when the gastrointestinal hemorrhage is only one symptom of a general disease; (3) true type, in which gastric content is blood, and this dominates the whole picture. To differentiate hemorrhage in melena neonatorum occurs before the fourth day, and in vast majority of cases in the first two days. Hemophilia occurs more often in males, rarely if ever in the first week, and usually with a history of heredity in mother. In syphilis you have hemorrhages everywhere. Pathology not known; post-mortem shows nothing; thrombosis ruled out; prognosis, 44 per cent. die. Treatment, maintenance of strength; plenty of fluids; keep warm; 10 per cent. gelatin to increase coagulability of blood, and diphtheria antitoxin.

CASE 4.—Pancarditis. Boy in third attack of rheumatic fever which involved every structure in heart. Heart compensating now. Has enormous heart, with lesions in all valves. Pulse tracing yesterday showed fairly strong myocardium. Patient been bedfast in this last attack six months. Interesting in that heart is compensating so well. Discussion by Drs. Morgan, McOsear, English, Duemling, Beall and Wilking.

Dr. Duemling presented the following specimens: Monster case. Had seen this case with Dr. Blosser. Mother primipara, save had an abortion at three months. Dr. Blosser delivered head but was unable to deliver body. Dr. Duemling could not deliver body, and on introducing hand into uterus found perfectly smooth, round, globular mass. Case moved to hospital, anesthetic given, and again went into uterus. In doing so perforated globular mass and body delivered itself after great amount of fluid had drained out. On examining specimen found patient had congenital hydronephrosis of right kidney. Abdominal cavity of child and tumor were entirely separate cavities.

Specimen 2. Endothelioma of ovary. Patient, 14½ years old. On examination ease gave sensation of pregnant uterus, but concluded she had an abdominal growth. Operation showed large kidney-shaped growth, which was removed.

Specimen 3. Annular carcinoma of hepatic flexure of the colon. Man, aged 56, weighing 180 pounds. Sudden, severe attacks of colic for one year previous to first examination. Given hypodermies of morphin and chloroform to control colic. No blood or mucus in stools. In right hypochondrium was movable tumor, diagnosed as floating kidney. Dr. Duemling made diagnosis of gall-bladder disease, but on operation found gall-bladder normal with tumor behind. Resection made and bowel united by needle and thread anastomosis.

Specimen 4. Polycystic kidney removed from man 40 years of age. Old tumor removed one year ago. Tumor not malignant. Has since gained 20 or 30 pounds in weight.

Dr. Duemling reported case which he saw once where both ureters were tied off and there was total anuria for seven days. Death followed. Post-mortem revealed no enlargement of kidneys.

Dr. Beall showed specimens of above tumors under microscope.

Adjourned to luncheon.

J. C. WALLACE, Sec.

CLAY COUNTY.

The January meeting of the Clay County Medical Society was held in Dr. Hawkins' office. A paper on the "Anomalies in the Practice of Medicine" was read, and an interesting discussion followed. The new fee bill adopted for 1910 was distributed and discussed. It was decided to make no radical increase in fees, but to have a uniform understanding as to minimum and maximum fees, and to make all office work on a cash basis. A talk was given on "Accounts and Collections," by a representative of the new Physicians' Protective Association of Indianapolis.

At the close of the scientific program an enjoyable luncheon was served by Mrs. Hawkins.

Adjourned.

G. W. FINLEY, Sec.

DECATUR COUNTY.

At a recent meeting of the Decatur County Medical Society the following officers were elected for the year 1910: President, M. A. Tremain, Adams; vice-president, B. S. White, Greensburg; secretary-treasurer, Charles R. Bird, Greensburg; censors, B. S. White, I. M. Saunders and P. C. Bente.

Adjourned.

CHARLES R. BIRD, Sec.

ELKHART COUNTY.

The regular meeting of the Elkhart County Medical Society was held January 6.

Case reports. Dr. C. W. Haywood reported a case of splenomyelogenous leukemia. Patient, widow, aged 52; family history negative; well until about twelve years ago when change of life appeared. Patient seen first April 1, 1909, complaining of shortness of breath and weakness. Skin presented waxy appearance; left side of abdomen contained a tumor, extending from under costal margin to a little above crest of ileum, and nearly to median line. Blood examination showed red and white corpuscles about equal in number; pulse 120, urine negative; liver greatly enlarged. Patient insisted upon having x-ray treatments, which were begun April 8; sixteen treatments were given, averaging one in every two to three days; extending over a period of forty-two days. Medium tube with anode directly over center of spleen tumor was used. Treatments were begun with anode at ten inches distance, with a ten-minute exposure, and distance gradually decreased to seven inches and time of exposure increased to fifteen minutes. On day following first exposure, a dropsical condition of limbs developed, the axillary glands became greatly enlarged, then decreased. After twelfth exposure spleen tumor became exceedingly sensitive to touch and treatments were discontinued for a week. On May 26 patient became suddenly worse, with pain in chest and back of neck, feeble heart action, marked dyspnea and cough, and died on May 28. Autopsy revealed liver and spleen enlarged to three times natural size; kidneys normal; gall-bladder greatly distended, containing a large quantity of creamy fluid, with over 100 gall-stones. The pathological laboratory of state university reported regarding liver, that the parenchyma is degenerated; a large accumulation of mononuclear leucocytes present in the interlobular spaces. Spleen pulp greatly increased and Malpighian bodies no longer visible. Pulp greatly congested and containing great numbers of mononuclear cells. Lymph nodes show similar changes to those seen in spleen.

Experiments have shown that the *x*-rays have a decidedly destructive effect on various forms of leucocytes, the effect of radiating spleen or lymph tissue in leukemic patients being at first a destruction of leucocytes in parts treated, second a production and liberation of leucolytic substances; third, the destruction of a certain number of cells in bone marrow by these substances. Observations have shown that direct splenic radiations are dangerous, as such treatment is usually followed in a few hours by a decided drop in leucocyte count and evidences of toxemia. Preponderance of experimental evidence favors exposure of practically entire body, excepting the spleen and the enlarged nodes, following a definite plan, so that the bone marrow of the different parts of body will be radiated in succession. It is advisable, therefore, to go over entire body at least twice with bone exposures, keeping well away from spleen, and if patient's general condition improves considerably, there being moderate leucocytosis, moderate spleen enlargement, and little or no evidence of toxemia, it may be safe to try the experiment of gradually including that portion of spleen with the radiations.

Dr. F. A. Benham also reported case of leukemia, dwelling particularly on patient's experiences with physicians, both reputable and quacks. He finally died on operating table of man who had promised a cure for \$150. Reliable reports from autopsy could not be obtained.

Dr. J. C. Fleming presented a paper on "Immunity from a Surgical Standpoint." The paper represents an attempt to apply the laws of immunity to solve some of the problems of surgery. Researches in immunity prove first, that the opsonic index and general resistance of patients suffering from acute diseases are greatly increased during and immediately following recovery from these diseases; that at the height of an infection, opposite condition—low opsonic index and lowered resisting power—usually obtains. Second, in many suppurative conditions, automatic sterilization of pus occurs. Reasoning from these premises as a general proposition, it is a mistake to operate during the acute stage of an inflammation. The author discussed the matter in detail with reference to the following conditions: Tubal infections, chiefly gonorrheal; acute tubal and puerperal pelvic infections; acute general sepsis; and appendicitis and appendiceal peritonitis. As to this latter condition there is much difference of opinion as to whether we should operate every case of appendicitis as soon as seen, or whether in a certain definite group of cases (usually seen first on third, fourth or fifth day of disease, and having a well developed general peritonitis) it is better to operate at once or adopt the suggestion of Ochsner and defer operation until the eighth to twelfth day; in the meantime carrying out the Ochsner principles and hoping that the immunizing forces of Nature will come to our aid and that the general infection will become localized. To decide this latter question the essayist wrote circular letters to twelve or fifteen prominent American surgeons, from which he quoted. The replies show about an equal number on each side of the question, but the essayist thinks the conservatives are gradually gaining ground.

Adjourned.

A. A. NORRIS, Sec.

HAMILTON COUNTY.

The fifth annual banquet of the Hamilton County Medical Society was held Tuesday, January 18, at the Houston Hotel, Noblesville.

The annual election of officers resulted in the following being elected: President, T. O. Redden, Jolietville; vice-president, M. C. Haworth, Noblesville; secretary-treasurer, J. E. Hanna, Noblesville; delegate to state association, F. A. Tucker, Noblesville; alternate, C. H. Tomlinson, Cicero.

Adjourned.

J. E. HANNA, Sec.

HOWARD COUNTY.

The December meeting of the Howard County Medical Society, held in Carnegie Library, Kokomo, was unusually well attended. Dr. Edgar Cox gave an interesting talk on "Pain as a Diagnostic Symptom," which opened a general discussion. The report of the secretary-treasurer was read and approved.

Election of officers resulted as follows: President, J. McLean Moulder; vice-president, T. C. Cochran; secretary-treasurer, LeMar Knepple; censor, N. C. Hamilton.

Questions of local interest to the profession, with reference to the coming year were discussed. Interest in the society indicates a good year for the Howard County Medical Society.

KOSCIUSKO COUNTY.

The Kosciusko County Medical Society met in regular session January 25. Minutes of previous meeting read and approved.

The Symptoms and Treatment of Pneumonia was the title of a paper by Dr. J. H. Bowser of Syracuse. In the discussion Dr. C. C. DuBois of Warsaw brought out the view held by Forchheimer that death from pneumonia could be due to collapse caused by the pneumococci poison on the vasomotor balance, through which there followed a dilatation of the abdominal vessels and a bleeding into them, similar to that which occurs in shock from other causes. As treatment he advised ice to the abdomen and adrenalin. Asphyxiation is another cause of death from pneumonia. Blood letting was advised to meet this impending condition. Dr. C. W. Burket of Warsaw spoke of the satisfactory results from blisters used in the stage of gray hepatization. He gets good results from use of calomel. Does not use morphin or opium in pneumonia, as it checks up secretion. Dr. C. R. Long of Pierceton spoke of the routine necessity of keeping bowels open, secretions going and watching for complications. He uses calomel, morphin and quinin and relies on muriate of ammonia as a curative agent. Dr. A. C. McDonald emphasized the value of ample ventilation, and mentioned the great variety of methods adopted in treating pneumonia by men of different training.

Etiology and Treatment of Osteomyelitis was the title of a paper by Dr. C. E. Thomas of Leesburg. In the discussion Dr. F. J. Young of Milford stated that he had found the use of gauze packing dipped in a 1 per cent. solution of silver nitrate very valuable in the treatment of this condition. Dr. W. L. Hines of Warsaw and President Yocum of Mentone both mentioned the fact that the patient desires to follow the expectant line of treatment and does not wish the doctor to perform necessary operation. Dr. C. W. Burket emphasized the necessity of operation as soon as the nature of the disease is surely established. Dr. T. J. Shackelford of Warsaw mentioned a case suffering from osteomyelitis of the tibia, on whom Dr. C. W. Burket operated with very satisfactory results.

In the absence of the essayist, Dr. C. N. Howard (the discussant) made an informal talk on the "Etiology, Diagnosis and Medical Treatment of Gastric Ulcer."

Adjourned.

C. NORMAN HOWARD, Sec.

MADISON COUNTY.

The regular meeting of the Madison County Medical Society was held in Anderson, December 28, with eighteen members present. The annual election of officers resulted as follows: President, W. A. Boyden, Anderson; vice-president, J. E. Hall, Alexandria; secretary-treasurer, Etta Charles, Summitville; delegate, L. O. Williams; censor, A. E. Alto. Following the election of officers an excellent address was delivered by the outgoing president, L. O. Williams.

Adjourned.

B. H. COOK, Sec.

(Meeting of Jan. 25, 1910.)

Society met in regular session in the public library, Anderson, with seventeen members present.

Dr. W. Austin of Summitville read a paper on pneumonia, which was followed by a lively discussion. Dr. J. B. Fattie being unable to be present, his paper on "Fracture of the Sacrum" was read by Dr. Stewart.

Adjourned.

ETTA CHARLES, Sec.

MARION COUNTY.

INDIANAPOLIS MEDICAL SOCIETY.

(Meeting of Oct. 5, 1909.)

There was no scientific program but the evening was taken up by informal luncheon.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Oct. 12, 1909.)

Society called to order by vice-president. Dr. Earp called attention to recent death of James S. McCready, former Mayor of Indianapolis, who, during his term of office, erected the first city hospital in Indianapolis, in 1854.

The evening was taken up by a symposium on rabies. Dr. H. R. McKinstry reading a paper on "History of Rabies," and Dr. H. S. Thurston on "The Cause, Pathology, Prognosis, Diagnosis and Treatment of Rabies." The papers were discussed by Drs. Eugene Buehler, Wm. Shimer, S. E. Earp, J. N. Hurty, W. N. Sharp, F. B. Wynn and F. R. Charlton.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Oct. 19, 1909.)

Society called together in clinical amphitheater of City Hospital by president. Cases from wards of hospital were presented by Drs. Frank B. Wynn and Theodore Potter.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Oct. 26, 1909.)

Society called to order by president. The first paper of the evening was on "The Clinical Significance of the Tongue," by Dr. S. E. Earp, in which he gave a description of the anatomy and physiology of the tongue, and discussed the diagnostic importance of certain conditions of the tongue, mentioning the causes of coated tongue.

Dr. G. B. Jackson read a paper on "The Present Trend of Obstetric Surgery," in which the author discussed some of the greater tendencies of this work at the present time, attempting to show that the choice of procedures must vary with environment of patient. Interference becomes necessary under following conditions: (1) Obstruction through soft parts of canal, and (2) abnormalities of soft parts. The author mentioned in turn eclampsia, placenta prævia and narrow pelvis.

Discussion by Drs. D. F. Lee, F. O. Dorsey, Fletcher Hodges, O. G. Pfaff, F. B. Wynn and T. W. DeHaas.

R. H. RITTER, Sec.

(Meeting of Nov. 2, 1909.)

Society called to order by Dr. Brayton. Program was made up entirely of case reports. Dr. Goethe Link reported ease of removal of great omentum and part of colon for carcinoma—anastomosis. Recovery uneventful, and at last report in good health.

Dr. F. B. Wynn reported case of acromegalia in woman aged 34, married; two children. First symptoms developed seven years ago; dimness of vision, diplopia and persistent severe headache; choked disc three years ago. Urinalysis negative. At this time condition diagnosed as myxedema; improved under thyroid extract. Bony enlargement of face and hands. Patient put upon pituitary extract, with slight rise in blood pressure; some improvement.

Angina Peetoris. Woman, 77 years of age; bed-ridden invalid from neurasthenia for 40 years. Moderate amount of arteriosclerosis. First attack lasted 30 minutes. An hour later pain returned, pulse became very irregular, rapid, and skin clammy; death occurred in about a minute.

Intestinal Indigestion. Man, aged 80; previous history negative except for occasional attacks of intestinal indigestion. First attack came on at 3 a. m. without any apparent cause. Pain subsided in three minutes after usual remedies had been applied; pain returned in five minutes, grew rapidly more severe; intervals between attacks grew shorter and shorter (having six in all), in the last he asked to be raised upon pillow thinking he was going to vomit, and death occurred immediately.

Dr. Paul F. Martin. Tubo-ovarian hematocele. Women, aged 31, married. No history of pregnancy. Severe pain in right pelvic region following metrorrhagia of two months' duration, followed by profuse bloody flow, with relief of pain. Similar attacks later. No sign of pregnancy. Operation refused. Improved following curettement. At end of year was found a left salpingo-oöphoritis tender to touch. Operation. On right side meato-salpinx was found, size of little finger, containing old hardened blood; right ovary cystic, adherent. On left side tubo-ovarian hematocele size of an orange was found. Uneventful recovery. No evidence of pregnancy.

Dr. T. B. Noble presented an instrument which he devised, called an anastomat, made on the general plan of the Murphy button.

Typhoid fever with perforation and operation, reported by Drs. A. B. Graham and J. A. McDonald. Malignant typhoid with intense toxemia, hyperpyrexia, severe hemorrhage and meteorism. Low enemata given. Patient delirious. Extreme distention suddenly developed. Vomited several times, and symptoms of peritonitis developed. Diagnosis of perforation made and Dr. Graham called in. Operation. Perforation slightly larger than pin head found in ileum

opposite mesenteric attachment. Perforation closed with purse string suture. Death followed in five hours.

Discussion by Drs. F. Hodges, T. B. Noble and A. C. Kimberlin.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Nov. 9, 1909.)

Society called to order by president. Paper of evening was read by Dr. Guido Bell, on "Psychology and Physiology Under a Common View Point." The author said that psychology and physiology constitute biology. Biology viewed from standpoint of psycho-physical interaction starts from internal self-regulation. Metabolism in plants and animals is a decomposition of large molecules into small atom-groups and a rebuilding of these molecules from atom-groups with succor from without. Evolution and all vital processes are marked first by individuality. The second principle of evolution is its dependence on species; and the third principle is mutualism. The author also discussed the psycho-physical law of Weber.

Discussion by Drs. J. V. Reed, C. F. Neu and A. W. Brayton.

Adjourned.

F. L. TRUITT, Sec. Pro. Tem.

(Meeting of Nov. 16, 1909.)

Society called to order by president. The first paper of the evening was by Dr. W. F. Hughes on "Squint," in which the author defined the condition, outlined the treatment, and discussed the pathology. He said that early and persistent treatment of squint cases usually result in parallelism of the visual axes without necessity of operation.

Dr. Jane M. Ketcham read a paper on "The Hygiene of Menstruation." The author gave a list of questions asked of school girls, and concluded that it was never intended that women should serve a course of invalidism every month. Close attention to the ordinary common sense rules of wholesome living will work wonders in a large number of cases of dysmenorrhea.

Discussion by Drs. H. C. Parker, W. N. Sharp, F. C. Heath, J. O. Stilson, Urbana Spink and F. Hodges.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Nov. 23, 1909.)

Society called to order by president. Program consisted of report of Indianapolis Tuberculosis Clinic for past year, by Drs. W. T. S. Dodds, on "General Considerations of the Clinic and Vaccine Therapy;" H. S. Thurston, on "Treatment from a Therapeutic Standpoint;" F. L. Truitt, on "Hygienic Measures," and Alfred Henry, on "Statistics and Results." Discussion by Drs. A. C. Kimberlin, Theodore Potter, F. A. Tucker of Noblesville, Eugene Buchler, Mrs. Lowes of the Flower Mission, Mr. C. S. Crout, secretary of the Charity Organization Society, Dr. Beasley of the Rockwood Tuberculosis Sanitarium, and Mayor Bookwalter.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Nov. 30, 1909.)

First paper on program was by Dr. E. F. Kiser, on "Angioneurotic Edema." The author said that angioneurotic edema is one of the group of diseases which have their etiology in some disturbance of the vasomotor balance. This group, termed the "dermato neuroses" by Deloier, includes a wide range of affections of the skin. The majority afflicted are of the neurasthenic type. Heredity plays an important part in the etiology. Overwork, worry, nervous influences in gen-

eral, alcoholism, acute infectious diseases, etc., are mentioned as predisposing factors. The most distressing feature of the cases, aside from skin manifestations, is gastrointestinal irritation, which occurs in about a third of all cases, usually in the form of colic. Cases have been diagnosed as appendicitis, kidney and gall-stone colic, some cases having gone on to operation. Diagnosis can only be cleared up by the appearance of the eruption, which is often delayed for a long time after the colic appears. The disease is not fatal unless the respiratory mucous membrane be involved, and death occurs through edema of the glottis. Treatment, massage and electricity, with removal of the exciting cause, if any. The author reported two typical cases in his own practice.

The second paper was by Dr. E. B. Mumford, on "Diphtheria."

Discussion by Drs. A. W. Brayton, C. R. Sowder, Fletcher Hodges, S. E. Earp and Theodore Potter.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Dec. 7, 1909.)

The society was called to order by the president, Dr. Potter. The minutes of the previous meeting were read and approved. The program was made up entirely of case reports.

Dr. C. F. Neu reported a case of multiple sclerosis. Male, white, laborer, aged 27, seen in the Bobbs Free Dispensary. Family history, previous history and habits unimportant. First symptoms noticed in October, 1907, when he first got up after an injury necessitating amputation of the left hand. The incoordination first appeared in the legs, slowly extended, involving the head and neck about eighteen months after the first appearance of symptoms. Patient is well nourished; mentality clear but rather indifferent to his condition. There is marked oscillation of the eyeballs when attention is called in any certain direction, slight slowness and hesitancy in speech, and extreme intention tremor in arms and legs. There is no sensory or specific sense disturbance or visceral or organic reflex impairment. The special features of the case are its comparative rarity in this country, its occurrence in an apparently healthy individual otherwise, and its apparent definite and close relationship to an injury as the exciting cause.

Dr. J. R. Eastman reported the following cases:

- a. Polar ligation in exophthalmic goiter.
- b. Umbilical hernia containing all the abdominal viscera.
- c. Continued excessive metrorrhagia associated with successive intra-abdominal hemorrhage in tubal pregnancy.

Dr. A. W. Brayton reported a number of cases of scleroderma, favus and blastomycosis occurring in his Bobbs Free Dispensary Clinic.

Adjourned.

H. R. MCKINSTRAY, Sec. Pro. Tem.

(Meeting of Dec. 14, 1909.)

The society was called to order by the president, Dr. Potter. The minutes of the last meeting were read and approved. The first paper was read by Dr. J. H. Ford, "Surgical Interference in Basilar Fracture of the Skull."

The second paper was read by Dr. E. S. Knox, "Report on Autopsies."

The third paper was read by Dr. David Ross, "Bone Transplantation."

Dr. Ford referred to the increased and increasing dangers of life with our modern means of transporta-

tion, especially in the streets of a large city. All the chances for head injuries are immensely increased and this should call for a more careful study of the means of treating such cases. In the first place there is great need of securing in all cases an accurate clinical history of the nature of the accident and the action of the victim immediately following the injury, and up to the time he is seen by the surgeon. Dr. Ford discussed the anatomy of the base of the skull with reference to the vulnerability of the various parts and the extent of the lesions. He discussed the differential diagnosis of head injuries and urged greater attention to the operative procedures which have been devised. He believes that operation is not difficult or more dangerous than for other conditions and that free access to the fossæ of the base is easy. He believes that operation is indicated in every case where a positive diagnosis of fracture of base is made.

Dr. E. S. Knox made a report on 241 autopsies he had held, most of them while physician to the Coroner of Marion county. As to cause of death they were classified as follows: Heart lesions, 76; lung, 40; brain, 23; stomach, 19; liver, 3; kidney, 4; fractured skull, 15; broken neck, 3; burns, 2; premature birth, 1; gunshot wound, 14; chloroform, 1; cocaine, 1; carbolic acid, 6; morphin, 5; ether, 2; strychnin, 2; headache powders, 1; delirium tremens, 1; epilepsy, 3; erysipelas, 1; stab wounds, 4; peritonitis, 9; choked on food, 1; cause of death not satisfactorily determined, 4. Besides these there were 12 cases showing heart or vessel lesions, 44 lung and 30 kidney lesions. He called attention to 29 cases or 12½ per cent. of sudden or unexpected deaths from pneumonia, four of which were complicated with purulent meningitis. Pleuritic adhesions were present in 50 per cent. of all cases. He cited a number of cases where the autopsy showed incorrect diagnosis and urged the profession to hold more autopsies. In this connection he stated that there ought to be an autopsy held by a paid pathologist on all cases of interest dying at the City Hospital.

Dr. David Ross spoke of the comparative slowness of the progress in bone surgery and the increasing interest in osteoplastic methods. An important step forward was taken by Huntington of San Francisco in substituting the upper end of the fibula for a lost portion of the tibia. This has been repeated with satisfactory results by Stone and Codman of Boston. His own case was a boy of 13 who was injured by the accidental discharge of a gun, Dec. 25, 1908. The right fibula was fractured, a considerable portion of the tibia was carried away and the anterior tibial group of muscles in the middle third of the leg was completely destroyed. Amputation was advised but persistently refused by the father. There soon developed severe infection and loss of all hope of regeneration of bone lost, by growth from any small fragments that were left. Seven months after the injury, when the infection had been controlled and it was evident that all that unaided Nature could do had been done, the site of the injury was laid open, the fibula cut about two inches below its articulation with the tibia. The adjacent borders of the two bones were denuded of periosteum and fastened with nails which were removed ten days later. The tibia and fibula had become fastened together by callus below the seat of fracture. There was a space of about one and one-half inches between the ends of the fragments of the tibia. In spite of infection and considerable inflammation, there was a fairly firm union in four weeks. Three weeks later there was firm union. There are still two or

three sinuses with a slight discharge. Union is firm and the patient is now beginning to use the limb after much urging. There is about one and one-quarter inches of shortening. The latest x-ray photograph shows that there did not remain the close union of the tibia and the fibula desired but a generous callus has made the union firm. The gap in the tibia is completely filled with bone. Dr. Ross believes that this plan as suggested by Huntington possesses great possibilities in saving limbs where the bones have suffered injury from trauma or disease.

Discussion. Dr. N. E. Jobes said that the treatment of fracture of the skull resolved itself into the treatment of the complications either early or remote. The one most important fact to be determined is the presence of hemorrhage with compression and this often taxes the diagnostic skill of the attending surgeon. The blood pressure apparatus may be of great value in solving this question. It is of great importance to know exactly the course of events following the injury. He referred to the altogether too frequent mistake in accusing the victim of acute alcoholism when the symptoms are those of a cortical excitation from the injury. He has not been able to fully satisfy himself as to the advisability of operation. He has had patients to die with operation and without, and so his experience so far has not been such as to settle the question for him. He is more and more impressed, however, with the logic of operation in these cases and has a growing belief that this should be done in every case.

Dr. A. E. Sterne emphasized the value of the blood pressure apparatus in diagnosing hemorrhage and pressure. He believes most heartily in operation in all cases; this is too often delayed too long. Operation usually requires no anesthetic and adds nothing to the shock of the injury. Long continued pressure on the brain is a source of great danger to the brain tissue even if the first effect is not to destroy the individual. The least evidence of choked disc is sufficient to warrant an operation. The brain may be injured by direct violence or by no direct violence as by a sudden severe jerk, as was shown in one of his cases where the woman was violently jerked by her clothing catching in the door of an elevator. There was disagreement in the diagnosis but autopsy revealed extensive laceration of the brain. Minute hemorrhages after injury are very frequent but are usually recovered from.

Dr. J. H. Oliver discussed the earlier attempt to replace lost bone. Many methods have been tried, many have been partially successful but most are uncertain. He has been very successful in causing a new growth of bone to replace the gap made by a trephining by sowing over the dura small fragments of the button which was removed by the operation. The line of treatment as outlined by Dr. Ross is very hopeful. The extensive loss of bone is a reproach to surgery and the search for means of preventing this should be pressed. He fully agrees with the arguments advanced for the routine operative treatment of fractures of the base of the skull but would extend this to include fractures of the vertebrae. The great danger in fractures at the base of the skull is infection through the nose and ear which cannot be either sterilized or kept clean. Drainage is the whole thing in such cases and must be accomplished if any good is to be done the patient. He cannot agree that unconsciousness following temporary consciousness is diagnostic of fracture at the base, as his experience has proven this to be untrue. His belief is that operation should be done early and thoroughly.

Dr. R. H. Ritter, discussing the paper of Dr. Knox, said that this was the first hopeful note from the office of coroner that had been heard for a long time. The office of coroner as at present conducted, at least in the larger cities, was an anachronism and a burden to the community. The fault is not necessarily with those who occupy the office but with the ancient law which had not changed with the changing conditions and made the office one of value to the city. Untrained men were allowed to do the work; there was no opportunity or incentive for a man to prepare himself to do careful and accurate autopsy work with the assurance that he would be properly remunerated and given continuance of position. It is a matter of wonder that such a condition of affairs is allowed to continue. Dr. Knox was one of those who took the work seriously and made an effort to bring the position he occupied up to its proper standard. The proper interpretation of lesions or apparent lesions found at the post-mortem table is by no means an easy matter and requires experience and study. Too often the mere presence is considered sufficient to explain the death of the individual when the real cause may have been far remote. It is not the mere existence of a certain lesion that causes death in all cases but the perversion of function that should be studied out and thus the lesion be given its proper credit. Again, it is difficult especially in the gastrointestinal tract to differentiate post-mortem from ante-mortem changes. Such causes of death as gastritis should never be given because in all such cases there is some cause for the gastritis which is the real factor. Again a valvular heart lesion is of comparatively little importance and is never the cause of death. It is the state of the heart muscle or the disturbance of other organs by the altered blood supply that determines the life or death of the victim. It is to be hoped that the day is not far distant when in place of the present fleeting coroner there will be a judicial officer to take care of this phase of the office and a competent and thoroughly prepared physician to do the autopsy work. It is to be regretted that there are not in this city a place and a man to properly conduct autopsies so that those who desire to see such work may have the opportunity to do so. A resident pathologist at the City Hospital would provide this opportunity.

Dr. A. W. Brayton spoke of need of greater care in recognizing syphilis as the cause of death, especially in the sudden deaths of young men from "heart disease" or "brain disease." Improvement in the office of coroner will only come when the profession unites and sees to it that a physician is elected to that office or goes to the legislature and demands reform in the manning and conduct of the office.

Dr. E. W. Wales said that basilar fracture is of great interest to the otologist since three-fourths of all cases have ear symptoms and in one-fourth of all cases the line of fracture passes through the pyramid. There are on record reports of cases recognized by the otologist and operated by him with perfect recovery by the patient.

Dr. J. V. Reed called attention to the value of lumbar puncture in injuries of the head and back. In severe concussion there may be a very little amount of blood but if there is any fracture with hemorrhage within the dura a considerable quantity of blood will be found in the fluid.

Dr. Theodore Potter spoke of the recent attempt to sterilize or rather render the cerebrospinal fluid antiseptic by the administration of large doses of hexa-

methylamine. In one of his own cases of meningitis he had given the patient 60 grains of this drug per day and had been able to demonstrate the presence of formaldehyd in the fluid. He complimented Dr. Knox and deplored the lack of adequate post-mortem work in this city. Especially in the City Hospital a most valuable part of the study of disease is impossible because of the inability to have a larger number of post-mortems and a more complete study of the cases made after the death of the patient.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Dec. 21, 1909.)

The society was called to order by the president, Dr. Potter. The minutes of the last meeting were approved without reading.

Dr. Potter then introduced Dr. E. W. Mitchell, Professor of Medicine in the Medical Department of the University of Cincinnati, who addressed the society on "The Question of Change of Climate for the Tuberculous." Dr. Mitchell's argument was along the following lines: 1. No climate is a specific for any form of tuberculosis. 2. Certain climates offer certain favorable influences for the treatment of certain forms and stages. 3. Permanent residence in the climate found most suitable for the patient is the safest plan but is not always necessary. 4. Climate is one of the remedial agencies and is to be considered and applied as a drug or any other remedial agency. It should be selected with the same care, expected to give the same proportion of good and be given the same weighed credit. 5. Wherever the patient is sent he should have the most careful medical oversight and direction. 6. An occasional visit to a favorable climate by one who has been helped before is of value to those who are not able to remain permanently in the favorable climate.

Discussion. Dr. A. Maxwell referred to the immense importance of this subject and the widespread discussion of it that had taken place and is still going on. While he has had cases that recovered here at home and again has had cases sent to the most favorable climate that died he is convinced that all patients who can secure the means and can have the proper environment at their new location should be sent away and not kept in this climate. There are certain well-defined characteristics at each place recommended for this class of patients, such as temperature, altitude, moisture, etc., and all these should be understood and the selection made to suit the individual case. For most persons an altitude of about 2,500 feet and a dry, warm atmosphere are the best conditions.

Dr. A. C. Kimberlin said that there are few diseases which present to the doctor so many problems as tuberculosis and none that requires as much skill, tact, nice judgment and sympathy. The economic side of the disease for each patient is one of, if not the greatest phase of, the treatment. The medical care which the patient shall receive at the place to which he is sent is fully as important as the climate, and under no circumstances should a patient be sent to a place where the care will not be first class. He has had some very unpleasant experiences with the ignorant and unscrupulous physicians with which so many of the health resorts abound and it is difficult usually to direct the patient to some competent and honest man. No part of the country is of value unless there is competent medical attention there for the patient. There are so many factors entering into the decision as to the advisability of going away and the selection of a place to go that it

would take much time to enumerate them. Disposition is of great importance, whether the patient will be happy and hopeful, but too often this most important factor is lost sight of. Season must be remembered, for many places are very desirable in some seasons and most inappropriate in others. Certain complications such as pericarditis, which is very common, almost entirely eliminate the question of removal, for such patients will not be benefited merely by a change of climate and had better be kept at home. Again, patients must be convinced that they have tuberculosis and the doctor must be sure that the patient has tuberculosis. Nothing is more demoralizing to the peace of mind of the patient and his family and friends and to the influence and control of the doctor than hasty, inaccurate examination, hasty advice to go away and the discovery later that the whole affair was a mistake.

The society then formally adjourned and spent the rest of the evening in a smoker and informal reception to Dr. Mitchell.

R. H. RITTER, Sec.

(Meeting of Jan. 4, 1910.)

At this meeting Dr. Wynn, chairman of the Committee on Public Instruction and Legislation, filed his report for the year. He also exhibited a device for the public exhibition of matter in regard to disease, which was described in his report. On motion this report was referred back to this committee for investigation of ways and means to carry out its recommendations.

Dr. Gabo, chairman of the membership committee, made a brief report. Dr. Ritter made his report as secretary. Election of officers for 1910 resulted as follows: President, S. E. Earp; vice-president, J. L. Freeland; secretary-treasurer, R. H. Ritter. Dr. Earp having resigned from his position in the council, Dr. H. G. Gaylord was elected to fill the unexpired term. Drs. C. F. Neu and A. B. Graham were elected to fill vacancies in the council made by completion of terms of service of Drs. David Ross and A. W. Brayton. Delegates, Drs. David Ross, J. H. Oliver and J. A. McDonald.

The retiring president, Dr. Potter, read an address on "The Problem of the Nurse."

An informal smoker and buffet lunch followed the scientific program.

Adjourned. R. H. RITTER, Sec.

(Meeting of Jan. 11, 1910.)

Society called to order by President Earp. Minutes of last meeting read and approved. Dr. Earp called attention to the accidental death of the child of Dr. G. S. Row, and secretary was instructed to convey to Dr. Row the sympathy of the society.

On motion president and secretary were ordered to select a staff for the Colored Orphans' Home. Dr. Brayton referred to the fact that the ninety-fourth birthday of Dr. W. H. Wishard came on January 17, and the secretary was instructed to express to Dr. Wishard the good wishes of the society.

The president urged the members to give serious thought to the general welfare of the society, and to make to him any suggestions they deemed helpful, and promised such suggestion would be given careful consideration.

The paper of the evening was read by Dr. John J. Kyle, the subject being "Differential Diagnosis Between Labyrinthine Suppuration and Cerebral Abscess." Dr. Kyle discussed the anatomy and physiology

of the internal ear and auditory center, and the symptom of vertigo. Suppuration of the labyrinth is, fortunately, uncommon but still is often overlooked. Dizziness, vertigo and giddiness may or may not be associated with nystagmus. The form of nystagmus in this disease is the rhythmic type. The induction of nystagmus by the use of hot and cold water in the affected ear and in sound ears has developed a sign of great value in differential diagnosis. To Barany should be given credit for reducing this to a definite system. The rotary test is also of value. Sometimes in lesions of the brain, encephalitis or meningitis, an oversensitive labyrinth is encountered, and as soon as the cold water strikes the tympanic membrane or outer wall of the internal ear, nystagmus to the normal side occurs, which is profound and is accompanied by vomiting and severe dizziness. Sometimes labyrinthine suppuration and cerebellar abscess can only be differentiated by the removal of the canals, after which the caloric test is applied. The one most important symptom of labyrinthine suppuration is dizziness. It should be remembered that dizziness and nystagmus, which are induced by quickly changing the position, are always associated with internal ear disease and are not due to a general or central disease. In suppuration of the labyrinth, turning the head backward, to the side or forward, may produce nystagmus, whereas in cerebellar abscess no nystagmus will be produced by sudden inclination of the head.

Discussion by Drs. T. C. Hood, C. F. Neu, L. F. Page and closed by Dr. Kyle.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Jan. 18, 1910.)

The program of the evening was a symposium on gross lesions of the brain and spinal cord. Dr. A. E. Sterne discussed the diagnosis and symptomatology. With the aid of numerous drawings and charts he illustrated the means of localization and the proper interpretation of what at times seem anomalous symptoms. A correct diagnosis can only be made when the anatomy and physiology of the central nervous system are understood. Equipped with this information the localization of a lesion is in most instances not a difficult matter. Trophic signs are of far greater importance and more reliable in localizing lesions than sensory ones. Dr. J. V. Reed reviewed the pathology.

Dr. J. H. Oliver discussed the question of surgical operations, referring to two cases upon which he operated years ago, and had watched for a long time. Nine years ago he saw a case of extreme hydrocephalus with almost complete paralysis. Following a suggestion by Keen he tapped the lateral ventricles, putting in a horse-hair drain from the cavity to the dura. The head slowly diminished in size, growth of body and intellect occurred, and at ten years the child was able to enter a school for feeble minded. Immediately after operation death seemed imminent, but after that recovery was rapid. In the second case there was a large cyst in one hemisphere, and patient was apparently moribund when operation was done. There being no cyst wall contents escaped as soon as cavity was opened. Improvement immediate and marked. Later relapse occurred as cyst filled up. Skull was again opened, the cyst evacuated and brain tissue surrounding cyst cut away. Recovery again rapid and almost complete. After lapse of several years patient is well and able to go about with only slight motor paralytic symptoms. In another case following extensive fracture of skull requiring removal of several fragments there was a

large hernia, which has been slowly subsiding, with improvement in all ways. The brain was one of the very last organs to be subjected to surgical interference.

Surgery of the brain was wholly unknown before the advent of antiseptics, and its progress has been slow because of the slow progress in unraveling the functions of the various regions of the brain cortex. Not until the so-called silent areas are explained and the frequent anomalous grouping of symptoms cleared up can the field be opened up in its entirety. The paths into the cranial cavity are as yet but primitive trails. In preparing his patients for operation, the head is shaved twenty-four hours before operation, the scalp is prepared and covered with a dry dressing. Hexamethylamine is given freely just before operation, and ether is preferred for the anesthetic. If hemorrhage is severe the table is tilted to an angle of about 20 degrees. A piece of half-inch rubber tubing is wound around the head as a tourniquet. The old trephine is obsolete, the hammer and chisel are useful in only a few instances, and these have largely been replaced by Doyen's brace and bit, of which Hudson's modification is the best. The Gigli saw is extremely valuable for cutting the beveled upper edge of the bone flap. The flap should be carefully outlined before cutting is commenced and all cutting should be done as quickly as possible. Hemorrhage from the diploe is occasional, but rarely a source of danger, although the author had one case which bled for six days from this structure. The present tendency is toward finishing operative procedures in one stage rather than in two as formerly.

Dr. F. F. Hutchins discussed the mental manifestations and psychiatry. He said that mental manifestations are not necessarily indicative of a gross lesion but represent merely some disturbance of the cells having to do with psychic activity. The changes which occur in these cells or the conditions which bring about the abnormal activity of these cells may be purely chemical. Since such great variations are found even in the normal chemical processes in different individuals it is not surprising therefore that by a perversion of the chemistry of the psychic cells widely varying psychic phenomena should be shown in different individuals, suffering from the same or similar gross lesions of the central nervous system. The individual equation will determine the intensity and kind of the mental manifestations and not the gross lesion. These manifestations may be of some service in localization. If, for instance, there is a disturbance in the sight area, there will be delusions of vision without any defect of sight. Again we may have mania, melancholia and delusions of grandeur, indicating involvement of certain areas about which we know nothing at present. The older cells may have firmly fixed ideas and be better able to withstand harmful conditions, especially nutritive; the newer, younger cells may not have this vigor or nutrition, therefore old ideas and memories persist while new impressions are feeble and transitory. All grades of mental aberration would, according to this theory, depend upon the degree of chemical disturbance or lack of nutrition.

Discussion by Drs. Cottingham, Ford, and closed by Dr. Sterne.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Jan. 25, 1910.)

The first paper on the program was by Dr. C. F. Neu, on "Migraine." He first gave three case reports indicating the nature and character of the subject to

be considered, viz., periodical attacks of pain in the head, mostly unilateral and more or less limited in extent, with its seat of maximum intensity at times located in or about the eyeball. These attacks are usually associated with nausea, retching, vomiting and constipation with more or less disturbance of the special senses, especially sight and hearing, on the side involved, and to some extent also of common sensation. There is also usually some vasomotor and mental disturbances. Attention was particularly called to a so-called prodromal period of variable duration, from a few hours to several days, during which there is manifested a heightened sense of well-being, both physical and mental, and this time is the most opportune one to adopt measures to combat the attack. The attacks are as a rule more or less characteristic—last from 12 to 24 hours—are followed by but few after effects—recur at varying intervals—do not in themselves endanger life—tend to disappear after fifty years of age. The pathology is unknown but evidence is not lacking that there is probably a perverted chemistry in the cell metabolism in addition to an inherent susceptibility on the part of the tissues involved. Appropriate treatment early applied will almost always prove beneficial. Correction in errors in constitutional makeup and in habits of life go a long way to lessening the frequency and severity of attacks.

The second paper was by Dr. Eugene B. Mumford on "Lobar Pneumonia in Childhood." The author emphasized some of the points in diagnosis and presented a few cases with interesting and unusual features. The series is represented by 36 cases taken from hospital work; 33 per cent. between one and two years of age, and 51 per cent. between one and three years. In most of these cases onset was sudden, and most common symptoms high fever, restlessness and loss of appetite, abdominal pain being very common. In one case delirium was so marked as to require the restraining sheet. In two cases the attack developed within a few days after another child in the family had become sick with the same disease, suggesting direct infection. The respirations are increased in frequency, but there is never the dyspnea and severe cyanosis common in bronchopneumonia. Signs in lungs may not appear for several days and may even not be detected until after the crisis. Bronchophony is the earliest well marked sign. A diagnosis of pneumonia has been made by careful men without there being any signs in the lungs at any time, the diagnosis resting on history of case and on the typical course. The most common complications are pleurisy, empyema, otitis media and pericarditis. Treatment, an abundance of fresh air, regardless of outside temperature. Writer does not recommend morphin under any circumstances for children.

The third paper was by Dr. Ada E. Schweitzer on "Malaria in Indiana." in which the author said that malaria for a long time was widely prevalent throughout Indiana, though with the improvement of sanitary science, it has become almost unknown. From March, 1909, to November, 1909, nineteen specimens of blood received at the State Laboratory were found to contain malarial parasites, only six of which are known to have acquired their infection outside the state. Four specimens contained æstivo-autumnal parasites. These nineteen cases do not represent the total number occurring in the state, but they may serve to warn physicians not to allow preconceived opinions as to the absence of malaria in Indiana, to

influence their diagnosis in occasional sporadic cases occurring any time during the summer or fall.

Dr. S. E. Earp exhibited a copy of *Aesop's Fables* with extensive commentaries by the editor, published in the sixteenth century. Many ideas advanced by the author would be considered in perfect harmony with modern ideas of mental therapy advanced at the present time.

Discussion by Drs. F. C. Heath, F. R. Charlton, A. C. Kimberlin and J. H. Taylor.

Adjourned.

R. H. RITTER, Sec.

MONTGOMERY COUNTY.

The Montgomery County Medical Society met in regular session January 18. The paper of the evening was by Dr. W. G. Swank of Crawfordsville, on "Medical Inspection of School Children," in which the author said that the medical inspection of school children dates back about seventy-five years, but has only in recent years passed beyond the experimental stage. The earlier in life defects and abnormalities are discovered the more readily they are corrected or removed; therefore it is good sense on the part of the state to diligently set about inquiring into the condition of body, mind and morals of its future citizens. Inspection of school children, for the purpose of searching out defects, is founded, not on the theory that the average family physician is incompetent to find these defects, or too careless, but on the fact that parents are careless or lacking in observation, or ignorant of conditions in the child, thinking the child will soon grow out of any little weakness or defect which they might observe. The systems in vogue in different cities vary from inspection by teachers and nurses to elaborate special physical examinations by high salaried experts. Our legislature will likely give us a state wide inspection law at its next meeting, which it ought to do. This law should be modeled after the best laws already enacted and tried in other states, and should not be written with the question of economy too big before the eyes of its writers.

Discussion by Drs. Etter, Burkle, Griffith, Beatty, Ensminger, Barcus and Cowan.

Adjourned.

J. L. BEATTY, Sec.

PORTER COUNTY.

The Porter County Medical Society met in regular session at Valparaiso, January 20. Dr. H. E. Gowland was elected to membership in the society.

Dr. Orndoff of Chicago read a paper on "The Simplified Technique for Serum Diagnosis of Syphilis and its Clinical Value." The author gave a graphic and lucid explanation of the Wassermann reaction, making every step clear. His statistics showed positive reaction in 66.6 per cent. in the primary stage; 96.7 per cent. in the secondary stage, and 87.5 per cent. in the tertiary stage. This proves its unexampled value in diagnosis. In doubtful and atypical cases it is no longer necessary to choose between waiting for symptoms while the disease may do irreparable damage, and giving the scarcely less objectionable therapeutic test.

Dr. Pennington of Chicago read a paper on "The Rectum and its Diseases." By means of charts the line of union of the external and internal folds in embryo was shown, as also how each tissue brought its own nerves and blood-vessels. The line was shown to be the

starting point of almost all rectal troubles. On account of the minute folds and pockets this peccinate line is the easiest place for minute seeds, sharp points and hard particles to lodge. In order were traced the lodgment of a foreign substance, pruritis, ulceration, with possibly fistula. The futility of ointments and external applications was demonstrated when the cause still remained; hence it was apparent that an intelligent examination should be made in all cases.

Discussion was eliminated on account of the lateness of the hour.

Adjourned.

G. R. DOUGLAS, Sec.

ORANGE COUNTY.

The Orange County Medical Society held its regular meeting in Orleans on January 11, and elected the following officers: President, C. W. Dowden, West Baden; vice-president, R. E. Baker, Orleans; secretary-treasurer, S. F. Teaford, Paoli; censors, G. G. Colglazier, Leipsic, J. R. Dillinger, French Lick, and C. L. Boyd, Paoli; delegate, S. F. Teaford; alternate, J. R. Dillinger.

The membership consists of about one-half the physicians in the county.

Adjourned.

S. F. TEAFORD, Sec.

TIPTON COUNTY.

At the meeting of the Tipton County Medical Society held Jan. 22, 1910, the following officers were elected: President, H. E. Grishaw; vice-president, E. G. Downing; secretary-treasurer, S. M. Cotton; delegate, M. V. B. Newcomer; censors, H. G. Read, H. S. Gifford and A. S. Dickey.

Dr. J. P. Simonds of the State Health Laboratory read an interesting paper on "Some Facts Concerning Diphtheria Revealed by Laboratory Examinations."

Adjourned.

S. M. COTTON, Sec.

SIXTH COUNCILOR DISTRICT.

The Sixth Councilor District Medical Society held a meeting in the Carnegie Library Building, Greenfield, Ind., on January 20.

The first paper was read by Dr. Barrett of Knightstown on "Carcinoma of the Breast." The Doctor gave a fine essay on pathology of this condition. He urged an early operation.

Dr. Ford in discussion advised all physicians to make a thorough examination in such cases of both sides, with the patient stripped to the waist line. Early operation was advised, even in doubtful cases.

Dr. B. G. Keeney of Shelbyville read a paper on "Why Children Have Adenoids and Colds." His reasons were that in the ordinary homes there is not enough moisture in the air. He seemed to believe that moist, fresh air was the preventative for these troubles.

Dr. J. C. Sexton of Rushville read an interesting paper on "Cases Simulating Gall Stones." The paper was thoroughly enjoyed by all present. He gave a history of a number of cases going to prove that it was utterly impossible to make a complete diagnosis before the operation.

Dr. R. D. Morrow read a most interesting paper on "Serum and Vaccine Therapy." The Doctor favors the

use of tuberculin. He also gave an interesting history of a case treated for cerebrospinal meningitis.

Probably the most discussions followed the paper read by Dr. Bruner of Greenfield on "Case Report and Exhibition of Cardiac Vegetations."

Dr. J. P. Simonds of State Board of Health gave "Autopsy, Pathology, and Microscopic Findings." This was discussed by Dr. Theo. Potter of Indianapolis and C. H. Parsons of Rushville.

The Hancock County physicians are to be congratulated on the splendid district meeting held in Greenfield. There were many visitors from Indianapolis and surrounding towns.

Among those present were the following who registered: J. H. Ford, J. P. Simonds, Chas. Humer, A. W. Brayton, Theo. Potter, Dr. Kimberlin, F. C. Heath, and John Owen of Indianapolis, A. C. Pilkenton, W. R. Hough, J. R. Moore, C. P. Wilson of Greenfield, B. D. Meyers of Bloomington, T. J. Beherns of Philadelphia, C. S. Spitler of Mooreland, J. A. Sipe of Carthage, E. A. Hawk of Carrolton, and W. R. Johnson of Charlottsville.

The members of the district in attendance were as follows: Drs. Morris Drake, B. G. Keeney, T. C. Kennedy, W. S. Coleman, W. C. Smith, S. C. Sexton, L. M. Green, C. S. Bond, J. E. King, R. D. Morrow, R. J. Pierce, R. Schilling, D. W. Stevenson, I. F. Sweeney, J. C. Blossom, C. E. McKee, O. H. Barrett, E. B. Call, O. E. Halloway, G. H. Smith, J. E. Hiatt, E. K. Westhafer, S. C. Waters, C. G. Bartlett, J. A. Tully, E. J. Davis, W. B. Cooper, E. E. Kirk, C. A. Barnes, C. K. Bruner, Mary L. Bruner, J. A. Comstock, F. W. Cregor, E. R. Gibbs, Milo Gibbs, O. E. Heller, W. A. Justice, E. R. Sisson, Carl McGaughey, J. L. Allen, W. T. Fisher and A. M. Benjamin.

The meeting was followed by a banquet in the evening. Dr. T. C. Kennedy of the state society gave an interesting talk and Dr. Stanley Coulter gave an address on "The Physician as a Man."

BOOK REVIEWS

THE PHYSICIAN'S POCKET ACCOUNT BOOK. By J. J. Taylor, M.D., bound in full leather, 24 pages of practical instructions for physicians, 216 pages of accounts. Price, \$1 per copy; published by The Medical Council, 4105 Walnut street, Philadelphia, Pa.

This account book contains 218 pages for accounts, of which 8 pages are devoted to alphabetical index, 146 pages to regular accounts, 32 pages to short accounts, 24 pages to cash accounts, and 8 pages to birth, death and vaccination records. It also includes 24 pages of business instructions for physicians, which have been found to be very useful, likewise an average fee bill. The system of entry is very simple. The book is quite complete, of convenient size, and a thoroughly efficient account book.

PROGRESSIVE MEDICINE. Volume XI, No. 4. A quarterly digest, etc. Edited by Hobart A. Hare, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College, Philadelphia, assisted by H. R. M. Landis, M.D., Assistant Physician to Out-patient Medical Department, Jefferson Medical College Hospital. Dec. I, 1909. Paper, pp. 334. Lea & Febiger, Philadelphia and New York. \$6.00 per annum.

Always good, this quarterly presents in the current issue an exceptionally well-written number. The first

hundred pages or so are consumed by Edsall in a comprehensive review of the recent literature on diseases of the digestive tract and allied organs, the liver and pancreas. Then follows a short discussion of diseases of the kidneys by Bradford. As usual, Bloodgood's contribution is full and satisfactory and his résumé on the subjects of surgery of the extremities, tumors, surgery of the joints, shock, anesthesia and infections, shows the same careful preparation that is characteristic of his contributions. Belfield's discussion of genitourinary diseases is interesting as usual, and Landis' therapeutic referendum is full and well written.

SURGICAL DIAGNOSIS. By Daniel N. Eisendrath, M.D., Professor of Surgery in the Medical Department of the University of Illinois (College of Physicians and Surgeons). Second revised edition. Octavo of 885 pages, with 574 original illustrations, 25 in colors. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$6.50 net; half morocco, \$8.00 net.

There is no question as to the usefulness of a text treating only of surgical diagnosis. The second edition of Dr. Eisendrath's meritorious work has just been issued.

The changes noticeable in this edition are in the chapter on cystoscopy and ureteral catheterization which have been made to include the advances in methods of diagnosis; that portion of the chapter on the head giving the localization of the motor centers, and the chapter on renal lesions which has been rewritten. To the section on acute abdominal diseases much of interest has been added, as well as some very clear illustrative plates.

Particularly well placed are a number of foot notes and foot-note references to literature relating to recent advances in diagnosis and diagnostic methods.

PRIMER OF SANITATION. Being a Simple Work on Disease Germs and How to Fight Them. By John W. Ritchie, Professor of Biology, College of William and Mary, Virginia. Illustrated by Karl Hassman. World Book Company, Yonkers-on-Hudson, New York, 1909.

We can but feel the deepest gratitude to Dr. Ritchie for this and his other publications which are among the very few books treating of the elementary principles of sanitary science, and presenting them in such a way as to be grasped readily by the youthful mind.

Quoting from Dr. Vaughan's "Evolution of the Superman," "There is one very hopeful thing in this, and that is, the young are quick to learn and they are still unshackled by the tradition and dogmas that bind adults," and again considering Pasteur's statement that "it is within the power of man to cause all parasitic diseases to disappear from the world," we feel that a happy outcome will result from direction of the child with just such literature as this primer affords.

Each chapter is presented in an attractive and comprehensive style, quite as entertaining to the adult as to the child. The various principles of sanitation, the more common bacterial and protozoan diseases, the various agents causing dissemination of disease, and the duties of individuals and organizations in matters of public health are considered. Every chapter is concluded by a series of "points to be remembered." The illustrations are, most of them, original, and are such as will impress, forcibly and lastingly, the juvenile mind.

Educators who have had the book under observation as a text-book in the public schools, conclude that it is best adapted to sixth grade students. In so far as the problem of education of the public along the lines of

hygiene and sanitation is largely to be solved by the medical profession, and as the most promising solution is in the education of the child, this book is heartily recommended for the careful consideration of medical men and educators.

CONSTIPATION AND INTESTINAL OBSTRUCTION. By Samuel G. Gant, M.D., LL.D., Professor of Diseases of the Rectum and Anus in the New York Post-Graduate Medical School and Hospital. Octavo of 559 pages, with 250 original illustrations. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$6.00 net; half morocco, \$7.50 net.

In the whole domain of medicine there is probably no one ailment that calls for correction so frequently and yet whose treatment receives such scant attention as does constipation. How prone we all are to pass the subject by with the mere giving of a prescription calling for some favorite drug or combination of medicines, with little or no inquiry into the patient's habits of life other than what may be given under "occupation" in a routine anamnesis. And yet so well recognized is the fact that continued medicinal treatment for chronic constipation is an absolute failure, that every conscientious physician must surely feel a certain sense of guilt when he asks his patient to rely upon such remedial measures alone, to the neglect of such valuable therapeutic adjuncts as diet, exercise, educational and psychic training, hydrotherapy, electricity, etc.

So that when so eminently practical a work on the subjects of chronic constipation and intestinal obstruction is presented to the profession, and by one whose success in his specialty is the result of large experience and close application, it can but receive the heartiest welcome. And when Dr. Gant tells us that his results in overcoming the most troublesome case of constipation by non-medicinal measures far surpasses any that he has been able to obtain by drugs, we should be grateful for a detailed summary of his methods.

In this work, case histories are omitted that more time and space may be given to etiology, diagnosis and treatment. When more expedient, drugs are made use of temporarily in addition to other measures; hence space is given for a couple of chapters on the favorite medicinal remedies recognized by the best authorities.

Exception might be taken to the rather narrow conception of Glenard's disease held by the author, and to one or two of his therapeutic agents, such as his attempt at overcoming an atonic condition of the bowel musculature by colonic inflation with oxygen.

On the whole, however, the author's reasoning is sane and logical, the work is well written, profusely illustrated and, above all, decidedly practical and timely.

TUBERCULOSIS. A Treatise by American Authors on its Etiology, Pathology, Frequency, Semeiology, Diagnosis, Prognosis, Prevention and Treatment. Edited by Arnold C. Klebs, M.D. With 3 colored plates and 243 illustrations in text. Pp. 939. Cloth, \$6.00. D. Appleton & Co., New York and London, 1909.

With a list of collaborators comprising such men as Baldwin, Barlow, Biggs, Brown, Coleman, Freeman, Hektoen, Hutchings, Klebs, Knopf, McArthur, Minor,

Osler, von Pirquet, Ravenel, Sewall, Trudeau and Webb, each and every one an authority on one or more phases of the great subject of tuberculosis, this truly American work is a masterpiece indeed. Each chapter, written as it is by a clinician of the widest experience in his particular branch of the subject, and such text supplemented by a more or less complete bibliography, together with a résumé, in the form of an appendix, of the data offered at the recent International Tuberculosis Congress held last year at Washington, would seem to stamp this publication at the time of its issue, the final word on the subject.

The volume opens with a most interesting historical sketch by Osler, the chapter closing by a short review of American work on tuberculosis, the greatest of those who have passed away being named as Austin Flint. It is probable that there are to-day living in America men who are doing more for the cause of tuberculosis than any named in this chapter; for instance, Trudeau.

Ravenel's chapter on etiology and Hektoen's morbid anatomy are, as might be expected, all that could be desired on their respective subjects. Baldwin's rich experience at Saranac has enabled him to make most interesting his treatment of the subjects of resistance, predisposition, immunity and personal prophylaxis. Klebs, in his short article on the frequency of the disease, emphasizes the paradox that while tuberculosis at some time attacks practically every one of a civilized community, yet the disease in a dangerous form is relatively rare. He deprecates the lack of facilities in this country for a large series of post-mortems.

Symptomatology and diagnosis are treated in a most thorough and satisfactory manner, many illustrative cuts being employed. Relative to the much disputed question of dosage in the subcutaneous tuberculin test for diagnosis, Minor puts the minimum at 1/5 mgm. and the maximum at 10 mgm. The important chapter on public measures in prophylaxis is concisely written by Knopf. Under the heading of specific treatment Brown sums up the present status of tuberculin therapy as follows: "Tuberculin when properly given does no harm, may produce no apparent result, and may markedly benefit an individual patient, who can follow at the same time the hygienic-dietetic treatment while in a health resort, at home and at rest, or at work. Small doses and careful increase are most important, and by following them very closely some patients, even in advanced stages, reap great benefit. The immediate and ultimate results are, improved, fewer relapses occur, and more patients lose the tubercle bacilli in their sputum."

The chapters on home treatment by sanatorium methods by Coleman, and on climatic treatment by Sewall are eminently practical.

McArthur's and Freeman's contributions on surgical tuberculosis, though rather short for so important a subject, are nevertheless excellent.

All told the work is probably the best of its kind in the English language and should prove an exceedingly valuable addition to the working library of every general practitioner.

THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

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ORIGINAL ARTICLES

UNUSUAL INJURIES IN THE REGION OF THE SHOULDER-JOINT.*

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INDIANAPOLIS, IND.

Although the subject embraces a variety of different injuries that might prove interesting to discuss, the paper is limited to the consideration of only two classes, of which two cases have come under my observation recently, namely: 1. Complete supracromial dislocation of the clavicle. 2. Fracture-dislocation of the upper end of the humerus.

Until the advent of the systematic employment of the *x*-rays as an aid to diagnosis, such injuries were believed extremely rare, exceptionally serious, of difficult diagnostication, complicated treatment and unfavorable prognosis. Even from our present viewpoint, they are by no means to be considered of common occurrence, though with the advance in diagnostic and surgical technic, the difficulties may be said to have been largely overcome. Indeed, I feel it my extraordinary good fortune to have them fall to my lot, and believe them to be sufficiently uncommon to justify their publication.

CASE 1.—Complete supra-acromial dislocation of clavicle. Open reduction and suture. James H., aged 35 years, was admitted to the City Hospital July 2, 1908. He had been riding home from work on a 22-inch frame bicycle, and the front wheel striking a pile of dirt he was suddenly hurled head foremost over the handle-bars.

forcibly and directly striking his left shoulder against the dirt pile.

Status Presens.—Large-framed negro, of well-developed musculature, presenting a marked deformity in the left shoulder-joint, which simulated the ordinary angular deformity expected to be seen in a downward dislocation of the humeral head. However, the condition allowed a greater range of active motion and was associated with the ability to place the hand on the opposite shoulder, though an inability to reach the top of the head, and an entire restriction to all movements of the arm posterior to the body. The wing of the scapula was prominent and tilted on its axis outward and downward, displacing the acromion process slightly downward. The outer extremity of the clavicle was found situated 1½ inches posterior to and above the acromion process. It was ascertained that the humeral head was securely resting in the glenoid cavity, and the absence of crepitus was definitely determined. The forcible contraction of the sterno-cleido-mastoid muscle caused its undue prominence, and the partly unopposed action of the trapezius inclined the head toward the affected side, and pulled the outer end of the clavicle upward and backward. The diagnosis offered some practical difficulties, and was made only provisionally until the *x*-ray plate demonstrated the exact condition. Physical signs excluded humeral dislocation, but the possibility of an accompanying fracture of the clavicle accounting for the extreme displacement of the acromial end, could not be definitely excluded without the aid of the more exact method of skiagraphy.

The initial line of treatment pursued was according to the generally approved methods in vogue, by the application of adhesive straps about the body, under the flexed arm and over the padded displaced end of the clavicle, and the whole re-enforced by a Velpeau bandage. Apparently, this method succeeded in the reduction, but failed utterly in securing its retention. Pain continuing, interference with functional and passive movements increasing, former displacement and

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 8, 1909.

deformity recurring, in fact, the general unsatisfactory results ensuing upon this course of treatment for a week, determined me to perform the reduction by open arthrotomy and to secure firm retention by suture.

Operation performed July 8 by an anterior curved incision over the outer third of the clavicle, convexity backward, and splitting part of the trapezius muscle. The posterior dislocation with absence of fracture was substantiated, the coracoclavicular as well as the acromio-clavicular ligaments were found torn, their fringed ends enveloped in a mass of old blood-clot, and recent inflammatory exudate, and interposed between the articular surfaces. Only after freeing the joint-cavity of blood-clots, tissue fragments, etc., and extending the incision transversely through the trapezius fibers, was it possible to secure complete replacement of the luxated bone. It was necessary to drill holes through the end of the clavicle and the acromion process, approximating them with chromic gut, in order to maintain firm reduction, as the torn ligaments and the edematous periarticular tissues were too fragile to hold

and chest was encased in a plaster-of-Paris Velpeau bandage, and he complained of constant pain in the shoulder region, radiating down the arm to the hand. The history chart gave the following record:

John J.; nationality Macedonian. Admission March 23, 1908. Diagnosis: Fracture of head of humerus. On the night of March 23 the patient walked into the hospital, evidently in considerable pain. He had jumped from a train at 9 a. m., and had fallen upon his left shoulder. No pain elsewhere. Left shoulder was much swollen and contused, several blebs on posterior aspect of left shoulder. Forearm and hand edematous. On March 24 (following day), under ether anesthesia, as full reduction as possible was accomplished by traction; a firm triangular pad was placed in the axilla, a plaster-of-Paris cap and splint placed over the shoulder and the arm and forearm bandaged securely to the body.

Upon removal of the bandage on May 2, examination revealed the helpless arm swung in a typical attitude of downward dislocation of the



Fig. 1.—Posterior view.



Fig. 2.—Anterior view.

Case 1.—Marked deformity in supra-acromial dislocation of left clavicle.

securely the sutures placed through them. Having coapted the frayed ends of the ligaments and sutured the severed muscle fibers, a small cigarette drain was inserted and the wound closed. The immobilizing adhesive straps as previously described, supported by a firm Velpeau bandage, were reapplied. Uneventful recovery followed, the patient leaving the hospital July 26, with good functional use of the joint.

CASE 2.—Old subglenoid dislocation of the humeral head with concomitant fractures of the anatomical neck, through the smaller and greater tuberosities, and of the surgical neck. Difficult resection. I saw the patient for the first time at the City Hospital, May 1, 1908, five and one-half weeks after the receipt of his injury. His shoulder

humerus, abducted from the body, and supported at the wrist in front by the well hand. It was swollen, especially at the elbow, and exceedingly painful upon the slightest motion. The normal, rounded contour of the affected shoulder was flattened, the acromion process unduly prominent, the once muscular deltoid seemed atrophied. Measurement from the acromion to the external condyle showed no difference in comparison with the unaffected side. Any effort to find the location of the humeral head, or any attempt to elicit further evidence, proved futile, as the patient could not endure the pain caused by the necessary manipulation. After repeated efforts to secure a satisfactory skiagram, one was finally obtained, which showed fractures delineated along the anatomical and surgical necks,

at the base of the greater tuberosity, through the smaller tuberosity, and also a subglenoid dislocation of the head of the humerus, which latter fragment had been separated and displaced downward into the surgical neck. It was explained to the patient that the best possible result could be obtained only by resection of the head of the humerus, to which he consented readily, bitterly complaining of the constantly paining and useless arm in its present state.

Operation May 13, 1908. The usual anterior incision and blunt separation of the deltoid fibers were done. Adventitious tissues, cicatrices and extensive adhesions had effected great changes from the normal anatomy of the parts. By carefully isolating the long biceps tendon, and pulling it aside intact, the much-altered joint-capsule was penetrated with comparative little difficulty. The glenoid socket, largely filled with inflammatory products, was devoid of its humeral head, which was imprisoned by dense adhesions and newly organized tissue in a false socket in the axilla, and bound down firmly by the shortened and contracted subscapularis tendon. The greater tuberosity seemed pulled upward toward the



Fig. 3.—Case 1.—Skiagram of supra-acromial dislocation of clavicle; (1) clavicle; (2) acromion process.

acromion, possibly by the action of the supraspinati and infraspinati muscles. The capitulum, displaced downward and rotated backward and inward on its own axis, was firmly imbedded by abnormal bony union into the upper end of the shaft. The new joint permitted only a very limited range of motion. By tedious dissection, separation of dense adhesions and severance of the subscapularis from its attachment into the lesser tuberosity, the head was finally liberated and forced out without doing damage to any of the surrounding important structures. Subperiosteal resection of the bone was done at the surgical neck. After irrigation and thorough cleansing of the wound, the capsular ligaments were partially restored by suture, the deltoid loosely coapted, and with the exception of the gape necessary for

the insertion of a small cigarette drain, the wound was closed. The drain was removed at the end of forty-eight hours, and passive motion inaugurated at the end of a week. At the end of the fifth week the patient grew anxious for work, and requested his release from the hospital, being free from pain and satisfied of a useful arm in his own capacity for earning a livelihood.

Injuries, such as are represented by Case 1, constitute a field apparently wholly neglected by authors of surgical-text-book literature. The subject is superficially treated, totally inadequate for instruction, or is dismissed with misleading statements of the true anatomical lesions produced, and of the logical methods of surgical procedure. By way of illustration, I deem it not amiss to mention certain instances, to-wit: "Retention of the bone in place, after reduction, has presented so many difficulties, that some have thought it not

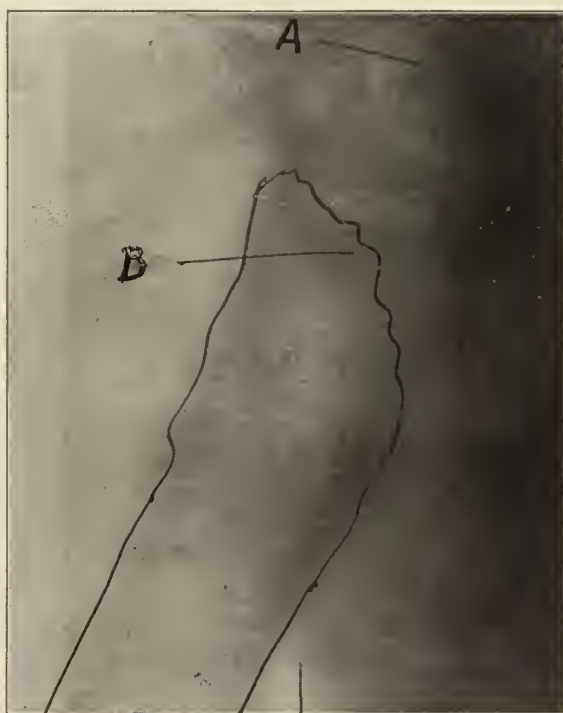


Fig. 4.—Case 2.—Fracture dislocation of shoulder joint, indistinct skiagram taken at time of injury, seven weeks before operation, leading to faulty diagnosis and improper treatment, true nature of injury being undetected. B, Fracture at surgical neck; A, fracture dislocation of head, not recognizable.

worth while to attempt it, especially since the persistence of the dislocation ordinarily causes no loss of function." According to another author: "After reduction the old method of treatment was to apply a Desault bandage, which was left on for three weeks, and decided deformity, enduring pain and disability were looked for as inevitable." Following this expression of opinion no further advice is given. Another view treating of the

pathology of this important condition, is accordingly expressed: "The exact pathological anatomy is difficult to ascertain, since only a very few have come to the autopsy table and the extent of the injury varied."

Upon perusal of the current surgical literature, a few notable exceptions to the common textbook presentation of this subject were found. Recognizing the true importance of these injuries, and that without a thorough knowledge of the condition, a rational treatment can impossibly be defined, Krecke, Pourier, Roeffel and Sheldon formulated certain deductions based on the pathological anatomy of the injury, which were derived as a result of separate and individual observation, respectively, on the

tion includes all in which the displacement is greater, and accompanied by rupture of both coraco-clavicular as well as acromio-clavicular ligaments. There is inability to reduce the deformity and retain the reduction, and in these open operative reduction is invariably indicated. According to Sheldon, when the separation approaches one inch, this indicates torn coraco-clavicular ligaments, and means operation and suture. My personal experience certainly corroborates these views, for in this particular case it might be said with definite assurance that a successful result was impossible without operative intervention. The interposition of torn ligaments, blood-clots and tissue fragments primarily prevented reduction; the inflammatory exudation ultimately forming pathological organization, and producing adhesions would undoubtedly have resulted in the "decided deformity, enduring pain and disability, so inevitable," as recorded and invariably observed by our forefathers.

Scudder, in his article on this subject, read before the American Medical Association, and published in *Jour. A. M. A.*, July 7, 1907, remarks: "From the evidence afforded, by some fifteen operations on the living recorded in literature, it seems to me that the conclusions of Pourier and Sheldon are amply justified."

Neither the uncommon occurrence of the injury nor the particular surgical technic followed in Case 2 is worthy of any especial note, but the early diagnosis of the condition, the recognition of its severity, and the prompt surgical operative intervention are of prime importance.

Fractures of the upper end of the humerus were formerly believed extremely rare, W. W. Keen¹ stating that in the statistics of Gurlt, covering 100 years, he records but 46 examples of fractures of the greater tuberosity. Skiagraphy has disproved this notion, for, according to Keen, the combined observation of six radiographers in Philadelphia has resulted in the compilation of 970 cases of fractures of the upper end of the humerus covering a period of about five years; 39 of these were of the greater tuberosity, 21 uncomplicated and 18 associated with other lesions. According to Dr. Pancoast of the Hospital of the University of Pennsylvania, of the skiagraphs made at the hospital, of fractures of the upper end of the humerus, there were 13 of the greater tuberosity. In six of them also a fracture of the surgical neck, in three also a fracture of the anatomical neck, the other four being uncomplicated. I have been unable to find in the litera-

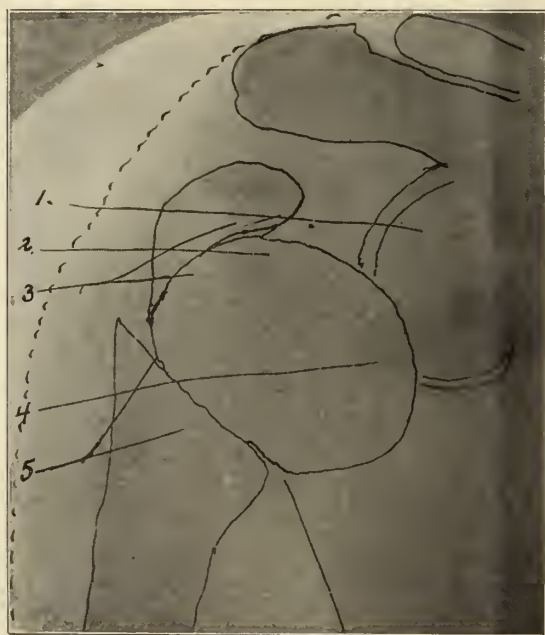


Fig. 5.—Skiagram taken at time of operation, seven weeks after injury. (Outline of shadow picture retraced.) (1) Glenoid fossa; (2) capitellum; (3) greater tubercle fragment; fracture at base extending through anatomical neck and smaller tubercle; (4) dislocated humeral head; (5) fracture at surgical neck.

living at operation, and not at the autopsy table. According to the extent of the rupture of the clavicular ligaments, the dislocation is classified into incomplete and complete varieties. The first division includes those cases accompanied by a separation of the acromio-clavicular articulation of less than the vertical diameter of the articular surface. In these the superior acromio-clavicular ligament is always torn, and sometimes the inferior acromio-clavicular ligament, and the conoid ligament of the coraco-clavicular articulation, and successful results may be obtained without operative interference. Complete disloca-

1. *Am. Surg.*, June, 1907.

ture any record of one corresponding to the case presented in this paper, in which are associated fractures of the greater tuberosity, of the anatomical neck and of the surgical neck.

According to C. B. Lyman, up to 1900, there were 122 cases reported of dislocation of the shoulder-joint, with fractures of the upper end of the humerus. Of these, 73 were at the surgical neck, and 6 through both anatomical and surgical necks. There was no record of the others. J. M. Mason states that McBurney had collected from the literature up to 1897, 117 cases of dislocation of the shoulder with fractures of the neck of the humerus, to which he adds 63 cases and 2 operated on by Schlauge and 1 by Dr. McAdory in January, 1908, making a total of 183 cases

fractures near the articular ends of the bones, and avulsion of apophyses. The second kind of lesion develops as a result of the irreducibility, and increases in extent in proportion to the time elapsed since the original injury. In Nature's effort at compensation, a new, but necessarily imperfect, joint formation is attempted at the site of the unnatural position of the head of the bone. This, eventually, becomes changed in contour or in size, or is entirely absorbed, in order to best meet the adverse condition existing. Intra-articular pathological exudates form, and in due time obliterate the unused joint-cavity. Dense adhesions surround the articulation, and ligaments, tendons and muscles become distorted, atrophied or contracted, and thus further impair the usefulness of the joint. Hence, pain, deformity and disability, as a natural consequence of old unreduced shoulder dislocations.



Fig. 6, A.—Anterior view, upper end of humerus (normal).



Fig. 6, B.—Anterior view of specimen. (1) Fracture at base of greater tubercle through anatomical neck and smaller tuberosity; (2) greater tuberosity; (3) dislocated rotated head.

reported up to January, 1908. There are no later statistics available to me.

In every shoulder dislocation there are two kinds of pathological lesions to be contended with. First, those causing the irreducibility, and second, those resulting from the irreducibility. The first kind differ according to the varying circumstances of the primary cause, and among the principal ones may be mentioned interposition of soft tissues, such as muscle or capsule, luxation of the articular head under the subscapularis tendon, or, as Lejars has shown, displacement of the head under pectoralis minor. These are difficult to determine before operation. Among those that may be readily ascertained before operation are

The therapy of these injuries should be based on their pathology, as ascertained by the aid of the Roentgen rays, and as revealed at early operation. Accordingly, it has been found by some observers, among whom are Jossel, Kocher and Perthes, that the pathology of many cases of habitual dislocation and recurrent dislocation, is fracture of the greater tuberosity, or avulsion of the supraspinati and infraspinati muscles. Before the use of the *x*-rays, many of these cases of fracture of the upper end of the humerus were diagnosed as severe contusions, often leading to serious consequences and permanent disability.

The precaution of subjecting these cases to the x-ray early should be tenaciously observed, as often, after only a short lapse of time, when inflammatory effusion and exudation has already occurred, the shadow picture appears indistinct, and renders operative intervention the only method certain for diagnosing a doubtful injury. Too often the exact nature of the injury remains undiscovered until late, when irreparable damage has been done, and when but partial restoration of function can be secured only at the sacrifice of some important structure, as in the case cited in the present writing. Too much stress cannot be laid on the importance of recognizing the true conditions early, and of appreciating fully the gravity of the injury and the

the 63, of which 3 recurred, and 1 was doubtful of success, leaving 3, or about 4.7 per cent., followed by good results. Absolute failure is recorded in 37 cases of 63, or in over one-half the entire number treated. Fracture or refracture occurred in attempting the reduction in seven instances, 11 per cent., which means that an additional injury was incurred by this method in more than double the percentage of successful results obtained. Again, the method of treating the fracture first and then attempting to reduce the dislocation, has no successful case on record, according to Lyman. Oger reports 10 cases in which reduction of the dislocation was deferred until after union had taken place, and in only 3 were there fair results. Still another method which was formerly practiced was to ignore the fracture, indeed to prevent union by establishing a false joint at the seat of the fracture, which obviously also met with poor success.

I believe that in all fracture dislocations the surgical procedure to be adopted should be open operative reduction, first securing the reduction of the dislocation and then fixing the fracture.



Fig. 7, A.—Posterior view. Upper end of humerus (normal).



Fig. 7, B.—Posterior view of specimen. (1) Fracture at base of greater tuberosity; (2) greater tuberosity; (3) dislocated rotated head.

possibilities of serious consequences developing, and no time wasted in giving early operative relief. These cases are emergency cases, as are strangulated hernia, wherein the danger lies not in the operation, but in the delay.

Among the older procedures of treatment for fracture dislocation of the shoulder, the method of manipulation is certainly an unsurgical one, and one which has been proved beyond a doubt most unsatisfactory in its results. McBurney reported 6 cases of death resulting from violent and persistent efforts at reduction. Of J. M. Mason's series of 63 cases collected, he reports the following: Surgical neck fractures 37, anatomical neck fractures 26. Efforts to reduce the dislocation by manipulation successful in 7 cases out of

This procedure is applicable mainly to recent cases, in which not sufficient time has elapsed since the injury for the formation of exudates within and without the articular cavity, for the production of dense adhesions and for atrophy and contraction of muscles to interfere with the functions of the joint. Of the cases collected by Mason, early arthrotomy and reduction, in surgical neck fractures, was followed by complete restoration of function in 68.5 per cent. of the cases, and in 33.3 per cent. of the cases of fractures of the anatomical neck, by unimpaired function. The fractured fragments should be reduced and fixed by suture, nails or by some of the various mechanical devices. The treatment of fractures at the anatomical neck may differ from one

at the surgical neck, especially if the line of fracture is entirely intracapsular and the head separated and cut off from the blood-supply, when it should be excised. In such which have been allowed to become old, resection is said to give the best results. Smitel, quoted by Koenig, was able to collect 15 cases of reduction in old cases by open arthrotomy, in 5 cases of which resection was afterward necessary, 5 were reported as improved, 3 unimproved and 2 dead. As a matter of comparison, he collected 32 cases of old dislocation, in which resection had been performed at once, of which 20 good functional results were secured. Summarized in brief tabulated form, we have the various procedures advocated in fracture dislocation and their respective results as follows:

Treatment.	No. of Cases.	Successful.	Per Cent.	Improved.	Per Cent.
Early Manipulation and Reduction	63	3	4.7	..	....
Late Reduct. after union of fracture	10	0	....	3	33.3
Early Arthrotomy and Reduction: Fracture at Surgical Neck.....	19	13	68.5	..	....
Fracture at Anat. Neck..	3	1	33.3	..	....
Late Arthotomy and Reduction	15	0	....	5	33.3
Late Arthotomy and Excision	32	0	....	20	62.3

Those tabulated under the successful column are cases resulting in no impairment of function; those under the improved column, cases followed by fair functional results.

The conclusions deduced may be summed up as follows:

1. The x-ray serves a valuable purpose, as an aid, often essential, to accurate diagnosis.
2. Radiography should be employed in connection with a thorough, properly conducted and painstaking physical examination, and not as a substitute, conclusive diagnosis depending upon the clinical manifestations as the keynote and the radiogram as correlative evidence.
3. Fracture dislocations of the upper end of the humerus are of greater frequency than is generally believed; it is often not recognized.
4. In all cases of dislocation of the humerus, an attempt at reduction by gentle manipulation under anesthesia having failed, open arthrotomy should be done at once.
5. Immediate open arthrotomy, under favorable circumstance, should be practiced in all cases of known fracture dislocations of the upper end of the humerus.
6. We should have no old unreduced dislocations.

DISCUSSION.

DR. H. R. ALLEN, Indianapolis:—I am pleased again to have somebody tackle bones and joints. These are the two topics we have made the least

progress in. Go away back in your text-books and come down to to-day, and where do you find any one calling attention to the shape of the fractured ends of the bone. General practitioners, and many surgeons, if they are called to a case of broken bone, go as if they were going to a fire, and they use just about as much judgment in treating it as they do at a fire. We can always wait for a while in the case of a fracture. But Dr. Martin calls attention to the fact that we must not wait too long. Do not wait until the muscles atrophy, or until the fossæ are destroyed by being filled up with fibrous tissue. Two or three weeks is ample time to wait before you try open work to set the bone. If the trouble is causing pain, relieve the pain. Study your bones. That is the point Dr. Martin is bringing out. Study the treatment carefully. Remember that reduction of the fracture is not one to ten as compared with the retention after reduction is secured. That is where we all go wrong.

Personally, I never use plaster of Paris in the treatment of any human being for any condition, nor can we find any one following mechanical pursuits, a blacksmith, a carpenter or a plumber, who will use it to gain a good point or to repair anything. Plaster of Paris, you will find out in a few years, is a surgical brainstorm that has come as a blizzard over this whole country. It is faulty and defective from a mechanical standpoint. There is no place where it can be used on a human being, for we can beat it ten to one. There are better appliances that are just as cheap and easier to make.

There are many instances in which we can avoid open operation, and it is advisable to do it when we can. If you have the head of the humerus fractured, the muscles act like the guy ropes on an inverted tent-pole. They are all pulling the fragments of bone up past each other. A downward pull is necessary. You simply put a crutch under the arm here and a bandage over there. I always use steel wire three-sixteenths of an inch in diameter and a piece of tin, putting the arm up at right angles to the forearm, put on an adhesive bandage, and tighten it up. That gives a downward pull on the forearm. The upper end is made by loops in the wire, with a loop under the axilla to pull it up. Every femur has got to be one-eighth of an inch too long. Whether you do an open operation or not, remember your fixation splint and the constant normal distances. Do not fasten a weight or pulley to any fracture unless you are willing to have a fight with the muscles. The muscles win and the result is shortening. You want a fixation appliance. Some of you will shake your heads at that. You will say you get your fractures united up. I congratulate you on your good luck for having the right shaped ends of bone. If you have retention notches and retention prongs you can pull the fracture down so that the ends of the bone fit

together. If you have an obliquity or a comminuted fracture, what are you going to do? The muscles will pull and shorten up. Therefore, you need a fixation device at the normal constant distance and your result will be surprisingly good.

Now, in regard to wiring bones. Arbuthnot Lane, the guest of the American Medical Association this year, is opposed to wiring the bones. Those of you who have done considerable of it are opposed to it, but what better have you for it? You do not have to hold the bones in this way with your wires. Suppose you have a fracture of the radius? Your pronators and supinators being arranged in oblique form, no matter how much you pull, the radius is going to dip in toward the ulna, no matter how much traction you put on. The same is true when you treat it by the mechanical means of putting a pad on to separate the bone. On account of the attachment of the fascia to the two bones, it pulls them together. Do not drill the bones. Simply throw a loop of wire around the bone and twist it. If both bones are broken throw a loop of wire around each and tie to the splint. You cannot tie to plaster of Paris. The results will be right if you go at them in a mechanical way.

(Dr. Allen described the use of metal plates with screws for holding the fragments in position.)

Do not drill holes to put the wire through. If you drill a one-sixteenth inch hole through the bone and *x-ray* it a month later, you have got an eighth-inch hole and considerable rarefaction of the bone. A loop is better, but better than that is the loose cleat. Make a very small incision big enough to put in a drill, drill one hole through one side of the bone, then put in a cleat bent at right angles, dip it down in the drill hole and turn them, and they hold. This is especially useful in fractures of the femur at the upper end, and in oblique fractures. Make the bone one-eighth to one-fourth inch longer than the normal position. There is no excuse for one femur being short or deformed simply because it is broken.

The text-books tell us we do not have bony unions in intracapsular fracture, but it is because we do not have apposition of the bones. They act as well in intracapsular fractures as in extracapsular. Fractures about the shoulder call especially for *x-ray* work. Never let a case of this sort go without an *x-ray*, because you cannot tell with the fingers what is the condition. Sometimes we find one slips where we have a fracture of the surgical or anatomical neck, or both dislocation and fracture. At least give yourself and your patient the benefit of an early and complete diagnosis, and the treatment can then be determined.

DR. G. D. MARSHALL, Kokomo:—The treatment of bone lesions certainly calls for mechanical ingenuity. That is the only trouble with Dr. Allen's idea. There is nothing wrong with his

appliances; it is in the application. We have too many doctors who could not drive a nail in a board without hitting their thumbs, to use these appliances. There is another thing, and that is lack of training the eye to symmetry. That stands in the way of the universal use of appliances. Retention of the shoulder joint is very admirable if it is in the proper hands, but if a doctor has a fractured shoulder and wants one of these appliances made there is not one doctor in a hundred who could make one in a week if he worked overtime. If he went to the blacksmith or some one else to make it for him, that complicates matters. Of course, plaster of Paris is not a scientific application at all, but it does cover up things and patients get well. It would be much better if fractures were dealt with on mechanical principles, but I do not believe they are.

I saw a case not long ago where a man who had a compound fracture of the leg which was put in a hollow splint, and a pasteboard cover over the top of it. The physician cut out a hole with his knife that looked as though an animal had been gnawing through, and with no possible chance for drainage, and nothing to hold the bones in apposition, and no way to see whether he was getting suppuration or not. Of course, it is unnecessary to state that amputation followed. If that had been put up in an open wire splint, and the wound treated correctly, the man would have saved his leg. I have used some of these wire splints, and have gotten along very well with them. However, I find it takes some training of the eye to develop that sense of symmetry required in these cases. Dr. Allen is one of the most finished mechanics I know of, and has a peculiar advantage in applying his appliances. His principles are sound, and the only trouble is in applying them.

DR. DAVID ROSS, Indianapolis:—This certainly constitutes a very important class of our fractures, and you might say there is no class of surgery that is more important than joint work. It has been stated again and again that they are to be treated on mechanical principles, if treated successfully, and that is true. The man who has no mechanical ingenuity cannot and should not try to treat fractures. In regard to the diagnosis, it has been said that we are not justified in treating these cases without availing ourselves of every advantage in making a perfect diagnosis.

I do not believe we should rely entirely on the *x-ray*, but it is an auxiliary means. No man can tell absolutely from manipulation what he has to contend with in a shoulder joint; and, given the diagnosis, it is not every joint that will have to be opened, and none of us advocate it, but there are some that must be opened under proper conditions. Wherever wiring of the bone can be escaped, if you regard your patient's good, leave it off. If the bones can be held in place without

it, it is a detriment, and if you are compelled to wire, by all means get rid of the wire as soon as possible. You will find just exactly what Dr. Allen drew attention to, that the bone is absorbed around the wire, and every man who has removed these mechanical appliances, whether screws or nails or wire, has been surprised to find how much destruction has gone on in the way of a rarefying osteitis. I have never thought of the very nice mechanical device Dr. Allen has suggested for bringing the bones into place, but it appeals to me as being good. I will use anything good that anybody can suggest.

DR. SCHMAUSS, Alexandria:—I did not hear Dr. Martin's paper *in toto*, but he has certainly shown skill in caring for unusual cases. We must not get the impression that we have these conditions in every case. In at least nine out of ten cases there will be no trouble in reducing the fracture and maintaining the position of the fragments. Of course, we have to have a little mechanical ability to adjust the parts and to retain them, and no man who has not that ability required to apply a splint or some appliance to retain the fragments, ought to undertake to treat fractures. I do not think, as does Dr. Allen, that we should abandon the use of plaster of Paris, for it is good in its place. There is one objection to it. When put on it is hard to remove, but we may not have to leave it on. It can be opened before it hardens, so that it can be removed and the parts inspected and reapplied, making a splint instead of a total encasement. Any fracture ought to be inspected in a week or so, and if not right it can be corrected, and false positions can be corrected, even at a late period, by force. The books do not say anything about it, but it can be done. Refracturing the bone is not necessary.

In regard to open operation in these cases, if it is necessary, it should be done early, and should not be postponed. These cases should be inspected in a week or ten days, for that is the time to open them up if the parts are in a malposition. In regard to fracture of the humerus, there is usually no trouble in maintaining it by the ordinary splint, fiber or plaster. Even pasteboard can be so molded as to retain the parts, and it is surprising how soon the fractured parts become immobilized by fibrous material, and cannot be displaced.

Fixation of the bone ends, through the skin, has very serious objections, and I have one case in mind that became infected through the wires running out, and you have to be very careful to prevent it. If the fragments can be kept in place by internal fixation, it is more advisable. On the other hand, it has the advantage that the wire can be removed. I would emphasize the importance of looking after these cases in a week, or a month or two months. They can be corrected at that time.

In overcoming muscular action I do not think it is quite as bad as Dr. Allen says. A steady pull will overcome that muscular action in twelve or twenty-four hours. In applying extension I would caution you not to apply too great a weight to the elbow or knee-joint, because considerable harm may be done and the patient may be incapacitated by a lame joint, and judgment should be used in that respect.

THE HOME TREATMENT OF TUBERCULOSIS.*

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Since there has been such an active crusade against tuberculosis in the last few years, the people are beginning to see their danger and are turning to the physician for advice relative to the subject. Much has been said about the sanitarium and the climatic cures, and each has its place and is of advantage to those who have the ability to avail themselves of their benefits. The idea of a climatic cure was the foundation upon which the outdoor treatment has been built, but the sanitarium was the architect who showed us the possibilities of it and has demonstrated beyond a doubt that certain definite results are within our reach. Climatic resorts have attracted and benefited thousands, and the scientific data from the sanitarium is a valuable asset in the crusade, but these methods are applicable to so few people that the time is well spent in considering what can be done for those who, for any reason, are unable to avail themselves of the advantages of either a change of climate or of a residence in a sanitarium.

If all the sanatoria in the country were crowded to their utmost capacity not 1 per cent. of the cases of tuberculosis would be handled. If all the tuberculous people who are financially able to take a change of climate and maintain themselves in the style and comfort they deserve were to go, there would hardly be another per cent. missing from the great army of consumptives. It is estimated that there are no fewer than 20,000 cases in Indiana to-day. A very large per cent. of these are among the poor who are at home looking to their family physician for advice and treatment. Therefore it seems reasonable that we consider the question of home treatment seriously so that we may advise these patients intelligently and that their chances of recovery may not be lost. We ought to familiarize ourselves with the

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details of the treatment so that our directions may not be too general, for when we tell a patient to stay out of doors, to eat an abundance of easily digested, nutritious food, and exercise moderately we have not done enough for him. The probabilities are that he will go quite as far wrong with such directions as if he were left to his own resources. The patient should be taught that the fight is a long one and that he will have to give up or modify his work so that he can make it his business to get well. He should study his situation and the disease as it applies in his case, and should cooperate with the doctor who will direct him in the details of his daily life.

Tuberculosis is a constitutional disease and the lung symptoms and destruction is only a local manifestation of it. As a local disease in the lungs there is no known remedy that can reach it. The object, therefore, of any treatment should be to increase the physiologic power of the patient to resist the infection and to destroy it when a lodgment has once been effected. The systematic effort to increase the nutritive forces of the body is clearly indicated. The success of the treatment depends upon a few things which have come to be regarded as fundamental. And whether the treatment be employed in Indiana or New Mexico: whether it is in the home or in a sanitarium, these agents must be utilized. Therefore, we will discuss in detail: Open Air Treatment, Dietetic Treatment, Hygienic Treatment, and the Treatment of Complications.

OUTDOOR TREATMENT.

Air is the first essential of this treatment and the conditions of atmosphere which constitute climate have very little to do with its efficiency. Not hot or cold air; neither moist nor dry air is meant. No amount of medication has ever been able to improve upon that which is supplied to us everywhere by Nature. For the patient to receive the benefits of this agent, it is necessary that he be in the center of a constantly changing air current all the day long. He must breathe the air, uncontaminated by contact with other lungs, for the full twenty-four hours in every day. There is no danger of drafts, for a draft under ordinary conditions will facilitate ventilation and can do nothing but good to a patient properly protected.

The means of supplying this element will depend upon the case, and the circumstances under which the patient lives will determine very largely the best means to adopt. If a wide lawn is available, a properly constructed house upon it will answer very well. If there is a balcony it can be made fit for use by covering and screening it, and even a house top or a fire escape has been pressed into service with good results. Favor is

being bestowed more and more upon the substantial sleeping quarters as being more suitable than tents and shacks. While the latter are cheaper and are within the reach of more people they are short lived and we cannot expect more than 18 months of service from a 12-oz. duck tent and that is not long enough to complete an arrest of the disease, to say nothing of the indefinite time the patient ought to sleep out after the disease is in abeyance. So the means of choice probably would be a substantial addition to the dwelling where the regular heating and lighting system may be extended, and where the patient may have as many of the comforts of life which the other members of the family enjoy as is compatible with the thought of the outdoor treatment.

One of the devices which seems practicable is called the in-and-out sleeper. It has the bed so arranged that by closing a glazed sash on the one side and opening one on the other the patient may be in the dressing room or outdoors, as the case may be. This device is to be employed in the State Tuberculosis Hospital at Rockville, Ind., and is now in use in one of the private sanatoriums of Asheville, N. C. The only objection to it is that one would hardly get as free a circulation of air by this arrangement as if the three sides of the room were open. But at best the sleeping quarters only serve the purpose of furnishing fresh air for a part of the day and we should not neglect the other part.

The patient should be closely wrapped, if necessary to keep warm, and should be placed in a position favorable to resting in the open air as many hours in the day as possible. All calls and other social obligations should be attended out of doors, if at all, that the free aeration of the blood shall not be interfered with. One should remember that all tubercular patients are more or less anemic and cannot stand the degree of cold that healthful people can, and the attendants should govern themselves accordingly by supplying hot water bottles and heaters to be placed within the wrappings so that the patients may be able to sit out comfortably even in zero weather.

DIETETIC TREATMENT.

The diet is one of the chief concerns of the physician and you may expect about as many kinds of trouble as you have patients. Of course, you will bear in mind the things suitable to all cases, for some will eat abundantly of one thing, while others will want something else. In theory it is very easy to make a diet list, but unfortunately our patients usually want something different, and the physician has to change the menu often so that the patient will not become indiffer-

ent and refuse to eat anything. Every appeal should be made to encourage the patients to eat. An attractive service is of utmost importance; not necessarily elaborate, but carefully and tastefully served, well cooked and supplemented by pleasant conversation and companionship. This will render unnecessary the injunction to eat, whether the appetite demands it or not. Appetite is not necessary, however, and the needs of the patient should be considered rather than the demands of his appetite. The albumins, carbohydrates and the hydrocarbons should be taken in proportion to derive the greatest benefit from them. The caloric value of foods should be borne in mind, and urea, which is the end-product of the oxidation of albumin, should be daily estimated, for it is a reasonably accurate measure of the albumin consumed and of the force available. Its rise and fall registers the condition of nutrition strength and bodily endurance. It is easily shown that in sickness and in health the excretion of urea rises and falls in proportion to the utilization of albuminous foods and the amount of exercise. If more food is taken than is used, of course some is stored in the tissues; if less is taken, then some must be extracted from the store.

Since three grains of albumin, when oxidized, will produce one grain of urea, and as most physiologists agree that about three grains of urea should be excreted per day per pound of body weight, we can determine the amount of albumin necessary for any patient by multiplying the weight by nine. Thus, the first problem of our feeding is solved, but the next one is not so easy, either in theory or in practice, for when we attempt to supply the amount we have just found necessary, in a form that will be agreeable to our patient's mental and physical condition, we have come to the real difficulty of the feeding of any sick person.

Suppose that our patient weighs 130 pounds. By multiplying this by 9 we find that he needs 1,170 grains, or 78 grams, of protein food while at rest, and about 115 grams when engaged in light exercise, to which should be added 140 grams of fat and 300 grams of carbohydrate. Suppose that he takes three meals and two lunches per day. If each meal represents three times as much as a lunch, then we can estimate that a meal should represent 31.5 grams and a lunch about 10 grams, so we can make up a menu as follows:

A Meal.		A Lunch.	
	Grams.		Grams.
Milk, 1 glass.....	8.0	Milk	8.0
Egg, one	7.0	Egg	7.0
Cream, 2 dr.....	0.4	Nuts .....	...
Bread and butter....	2.0	Fruit aa qs.....	...
Meat	14.0		
	31.4		15.0

The above meal and lunch represents much less than the average patient will take under ordinary circumstances, so we have a rather wide margin to enlarge upon in the case of the patient whose difficulty is loss of appetite; but it will serve to show how these items are calculated. It can be increased or diminished as the need or inclination of the patient demands.

Whatever is taken above the actual needs of the patient is stored up in the tissues for future use and may be called at some critical time when the appetite or digestion of the patient fails temporarily. The milk, eggs and meat will not vary much from day to day, as far as amount is concerned, but such methods of preparation will be employed as will stimulate the appetite as much as possible. Each item of the meal should be studied carefully that every meal shall be both pleasant and profitable to the patient.

We have assumed so far that our patient has normal digestive and assimilative powers, so that all the food taken will be utilized, but this happy state of affairs is not very common, so we have to study our patients to determine whether or not the individual is doing this. If 1,200 grains of albumin are consumed, and all is appropriated and used in the production of force, then we should find in the urine one-third that number of grains of urea, or 400 grains. If that is so the patient will neither gain nor lose in weight, as the supply and demand are equal. If, however, we are supplying more than three times as much albumin as there are grains of urea excreted, we conclude that the patient is either gaining in weight or the digestive powers are at fault. The scales will tell which condition exists, and if he is gaining in proportion to the excess mentioned then the case can be pushed to the limit of the digestive powers. But if he is not gaining, digestion may be at fault and the food passing the alimentary tract as a total loss, or the assimilative forces, may be at fault, for, since food absorbed never becomes nourishment to the body until it comes in contact with the oxygen in the air cells of the lungs, we may have food circulating in the blood and being eliminated without having been made available as force. By a careful examination we are usually able to tell whether we need a change of diet and digestives or whether the patient needs breathing exercises and more time out of doors. The subject of diet is one that is given too little attention and many of the bowel difficulties, which are so annoying to us and our patient, could be avoided by judicious advice upon this all-important detail of daily life.

HYGIENIC TREATMENT.

A patient should take a hot tub bath at least once a week. Each morning he should have a cold sponge bath, beginning with water of moderate temperature, about the neck and chest and lowering the temperature and extending the area sponged until water at 70 or even 60 can be borne over the entire body. Reaction is the thing sought, and if obtained no harm will result, but no good is accomplished if the reaction is tardy. The advantages of the cold bath lie entirely in the reaction produced. If the blood fails to return to the skin and increase the waste products eliminated, the internal organs will be congested and the one having the least resistance will suffer most from this congestion which will manifest itself by the flaming up of old or latent inflammations.

Breathing exercises are helpful or harmful, depending upon the case and the character of the exercise indulged. Deep breathing should be taught all tuberculous patients, for by it they get more oxygen and get a greater amount of force from the food taken; but in active cases great care should be exercised that the infection is not carried to areas not before invaded. So while breathing should be deep there should be no violence about it, and any tendency to cough should be a sign to stop for the time being. Lung gymnastics that stretch the cells, such as slapping the chest when the lungs are fully distended, can do nothing but harm and should be discouraged. As the disease becomes arrested, of course, greater freedom may be allowed. A good exercise is to stand in the open air and inspire all the lungs will contain comfortably, rising upon the tiptoes at the end of each inspiration, ten times morning, noon and night. This done daily for a few months will probably accomplish all that can be expected from breathing exercises.

All the social relations of the patient should be conducted in the open air. Calls, if made at all, should be at such an hour and season that the visit may be made out of doors. Callers should be received in like manner. Society and social gatherings are not for the tuberculous person. Evil results almost always attend them. You will notice that a higher temperature is present during the visits of friends or when the patient makes a call, so it seems reasonable to limit the social life of the patient as much as is possible, and what is allowed should be confined to the morning hours and during days when the patient has no fever.

Rest and exercise should be so regulated as to maintain a balance between the disease and the vital forces. The patient should take no liberties

in the matter of exercise. Immobilization is the treatment for hip-joint disease, and it is as efficient in all other tubercular lesions, and, since the lungs partake of the excess of mobility in exercise, it should be very carefully restricted. The dangers of over-exercise are exciting cough, hemoptysis, sweats and a rise of temperature, any or all of which may be attended by a loss of weight. The patient should only be allowed to take such mild exercise as driving or slow walking. It is best to indulge in these either early in the morning or late at night, as the maximum of temperature usually occurs in the afternoon.

Rest should be required before each meal, so that the patient may be in a bodily and mental condition most favorable to the digestion and assimilation of the food taken. Half an hour before and at least an hour after meals should be spent reclining. It is common knowledge that patients, especially when on the road to apparent recovery, are inclined to take too much exercise, and what we have gained by months of careful watching, and what has been accomplished by long exposure to the fresh air, may be quickly and effectually destroyed by a slight indiscretion either in the amount or kind of exercise taken. No exercise should be allowed a patient who has fever, nor for a week after fever has subsided. Then very slight exercise in the form of walking may be allowed for half an hour mornings. If after a week of such exercise no untoward symptoms arise, the exercise may be gradually increased; but if any fever arises, or loss of weight is sustained, the exercise should be immediately interdicted.

The most important point in the hygienic treatment of these cases is disinfection. This is important, both to the patient and the community where he resides. To the patient because the infection which he scatters might reinfect himself in a new field. Every avenue to the human body has been interrogated by the scientist, and all yield the evidence that the tubercle bacillus may enter the body by any route. The skin, the mucous membrane of the nose and throat, the epithelium of the gut and respiratory tract, the eye, and the serous surfaces have been infected. These avenues are all open to the reception of the bacillus in the sick as in the well, so one would be a very audacious person indeed, who being already sick, would subject himself to the dangers of such an infection if it could be avoided.

It is important to the community that the strictest rules of disinfection be enforced, for by so doing is the only safeguard from these people, and therein lies the hope that the vast army dying every year of this disease is to be materially less-

ened. It is not difficult to employ these safeguards. Constant thought should be employed that no tubercle bacillus should be deposited where it cannot be immediately destroyed. Spit cups with paper refills can be bought at almost any drug store. Paper napkins can be had everywhere. Let the patient expectorate into these and they can be burned and the danger passes. One should bear in mind that the wet bacillus is comparatively harmless, and if it is wet in a 5 per cent. solution of carbolic acid it is very soon dead. It is the dry bacillus that gives the trouble as it floats in the atmosphere and endangers every one liable to breathe it. So if the patient exercises due care as to the destruction of the sputum, either by burning the cups or papers or by keeping the cuspidors filled with an antiseptic solution, the hazard of infection is lessened.

SYMPTOMATIC TREATMENT.

Sweats.—They are usually not very troublesome after a few weeks in the open air, but when they are they can be controlled by cold baths, to which may be added a little alcohol or formalin. The drugs employed are agaracin, atropin and camphor.

Fever.—Fever is the index to the degree of intoxication. Elimination will relieve it. Longer time in the open air, rest and attention to the excretions is demanded. If not relieved by these methods, put the patient to bed and restrict the diet for a little time. Average daily temperatures should be made, as exacerbations are likely to occur from the most trifling circumstances, and the observer will be misled unless some standard is at hand with which to make comparisons.

Digestive Symptoms.—Constipation is neither a frequent nor a disagreeable symptom, and when it does occur can be easily remedied by the use of a regulated diet, or a simple cathartic as cascara sagrada. Diarrhea is likewise infrequent unless the indigestion is present or the disease is attacking the mucosa of the bowel. In the first instance a thorough cleansing of the tract, either by a saline or enema, will usually suffice. In the latter, heaping teaspoonfuls of subnitrate of bismuth as often as needed, offers about all there is to recommend at this time.

Hemoptysis.—A most alarming symptom, and one for which very diverse remedies have been employed. The tendency is toward spontaneous checking of the bleeding when the blood pressure reaches zero, so we need not be too active. The patient should be reassured, and very often a hypodermic of morphia is a good thing to steady the nerves. Every effort should be made to

encourage the formation of a clot, so cold applications to the chest, bandaging the extremities and raising the foot of the bed should be tried. Anything that will lower blood pressure in the pulmonary artery will help, so cathartics, nitroglycerin and the nitrates are useful. Atropin and ergot are contraindicated because they raise the blood pressure. Salt solution increases the volume of blood and tends to wash out clots already formed.

Cough.—Cough is another symptom that very soon will adjust itself when the life in the open is followed. Within a few weeks the cough lessens and the expectoration is diminished. Patients should be taught to guard against cough as much as possible, and they will be surprised at the control they can exercise over this symptom. The usual cough mixtures, containing opium in some form, are not indicated. Heroin or codein, if an opiate is indicated, will allay an irritation which causes cough at night. Hot milk or lemonade before rising will often allay the troublesome morning cough. Proper breathing will often stop a cough. Take several prolonged inspirations with forcible expirations and the obstruction will often be removed.

These are the most common symptoms met which require treatment, and when met will render the patient fairly comfortable, but others are liable to arise, as chest pains, pleurisy or insomnia, which will be met by the attendant in the way most suitable to the case in hand.

DISCUSSION.

DR. G. T. MCCOY, Columbus:—I did not expect to take any part in the discussion of this paper, but I am glad the subject has been presented. I attended the National and International Congresses on Tuberculosis, where I heard a great many papers by eminent men on this subject, and I have been much interested in it, because in Indiana we are going to do something in the sanatorium treatment of tuberculosis. When we remember that 98 per cent. of the tuberculous will be treated at home, if treated at all, then this paper is very timely.

I endorse the general outline of the paper and the treatment recommended. One thing the doctor did not speak of and emphasize as much as the subject demands, is the bath. I believe the bath is the best remedy for cough, for fever, and even the best remedy for the exhaustion. It is well known that active exercise disseminates the toxins of tuberculosis, especially exercise which will produce elevation of temperature, and no patient should be allowed to walk or take any other kind of exercise if it will increase his temperature even one-fifth of a degree, especially when you take hold of such a patient for the first

time, or until you know him thoroughly. In most of the sanatoriums they put these patients to bed out of doors, until the temperature declines to normal. Along with the reduction of the temperature you will find that their night-sweats, if they have them, will disappear, and the rest they get is the best expectorant that I know of. I mean by expectorant it liquefies the expectoration and makes the cough easy. It is unnecessary to stop the cough entirely, because some cough is necessary. We do not wish to stop cough entirely, because it is one of Nature's efforts to relieve the engorged lung.

In regard to cough remedies, I think it is wrong to use codcia, heroin and morphia, or any of these products if you can possibly do without them; neither do I believe in muriate of ammonia or remedies of that character. I have found if I can get complete control of patients and place them out of doors in good air, and keep them occupied, the majority of the disagreeable symptoms of tuberculosis will soon be mitigated or subdued entirely, and after they are subdued the patient should be kept in the same environment for a week or ten days longer.

The diet is the hardest problem of all. We must expect these patients to eat nutritious food, and sometimes we go further and say they shall take so many ounces of milk, so much beefsteak, so many raw eggs, and things of that kind. We find that a great many of them cannot endure that kind of diet very long without a change, and as a general rule I find the patient's appetite must be consulted. At the same time, I insist on a sufficient amount of nutritious food to balance some of the indiscretion.

Again, I want to say I wish to thank Dr. Blossom for bringing this subject before the Society. We ought to have more papers on this subject, because we have got to treat 98 per cent. of these cases of tuberculosis in their own homes.

DR. THEODORE POTTER, Indianapolis:—I want to present just one or two practical phases of the so-called home treatment of tuberculosis. Dr. Blossom's paper was a very interesting one to me. It was largely a paper upon the treatment of tuberculosis, but he has not emphasized as much as I had hoped he would the peculiar problems which arise in connection with what is called the home treatment, as distinguished from the institutional treatment.

Now, as we all know, the institutions for the treatment of tuberculosis are such that when patients go there they do not stay long enough, and it is very essential to urge upon them and upon their relatives that they should stay as long as possible. The longer such patients can remain in such institutions, the better it is for them.

It is true, as Dr. McCoy has pointed out, that a large proportion of these cases of tuberculosis must be dealt with at home. They cannot go to these institutions for various reasons. In the

first place, some cannot afford it, others think they cannot afford it. Some cannot leave their families, or think they cannot, and some of these patients get home-sick, and will leave in spite of anything you can do or say. So, as a matter of fact, there are a great many patients who have tuberculosis, even if we exclude the poor, who cannot afford it, and who must be dealt with largely at their homes. We must remember another thing about this disease, namely, that in spite of the fact that tuberculosis is a curable affection, yet it is one of the most obstinate and persistent diseases with which we have to deal. In a great majority of instances, under the most favorable circumstances in institutions or elsewhere, the disease may be arrested, but the patient is not cured in the radical sense of the word, and even when he returns home he should be under the care of his physician for some time. The point I wish to make is this: If you have to deal with these cases at home very largely, it is certainly a great advantage to have had these patients sent to a sanatorium, if only for a limited time. Of course, that is the ideal way of treating these cases, and some of them will stay away six months or a year, or if you cannot get them to do this, you must do the best you can with the home treatment of the disease. In a few months these patients learn to carry out the instructions of the physician in the way of getting as much fresh air during the day and night as possible, and they learn also about the importance of diet. They learn another very important thing, and that is to trust a doctor. I am sure it will be a great help to many of you if you have not had this experience. They learn the importance of having a physician to take charge of their cases, no matter where they are. The same thing is true of tuberculosis as of syphilis. You know that the average man who has had syphilis, after the eruption has disappeared, does not think of employing a physician any more, and yet he has to be constantly under the care of a physician for at least two years or more, and the same may be said of patients with tuberculosis. They soon learn the value of having themselves under constant medical supervision. No matter what the doctor does for them in an institution, they do not get much medicine. They do not need it, and these patients learn to keep themselves under the care of physicians, if they do not get any medicine, and that of itself is of inestimable value when they come back from institutions to be treated at home.

DR. F. W. HOWAT, Hammond:—In a great measure this subject is as much a sociologic question as it is medical. My experience is that the vast majority of tuberculous patients are those upon whom families are dependent for their living, and if you take these to an institution their means of support is taken away from that family who is dependent upon them. If you leave them

at home, and insist upon a life of idleness, this also means that the sustenance is taken away from that family. In this connection I have been interested in some of the reports of sanatoriums in Europe, where they employ what is known as the graduated system of work. That is to say, the graduated exercises given these patients is in the nature of work. They are taught to use the shovel and spade, the pick and hoe, and to do gardening and many other things. At the same time, this furnishes a reasonable amount of exercise. The tuberculous patient who is running a high temperature, or a moderate temperature, who is suffering from extreme exhaustion and night-sweats, and all that coterie of symptoms, is not in a condition to take exercise, even in the mildest way. But there is that type of chronic tuberculosis where the patient can still be of some use to his family and to the community in which he lives. The idea that I had in mind in getting up was to bring once more to our minds, if possible, the thought that after all, tuberculosis is as much a sociologic problem as it is a medical one.

DR. BLOSSOM (closing).—The scope of a paper of this kind must necessarily be limited. When we consider the number of volumes that have been written on the subject of tuberculosis at various stages, sociologically and otherwise, we would not naturally expect to cover all phases of the subject in a twenty-five minute paper. I am glad to know that the gentlemen who have discussed it have brought out some very important points which are all parts of the problem. They all have to be met, and the general practitioner has to meet them. While we would like to see our patients go to sanatoriums and stay there as long as possible, eventually they come back to us, and I think it devolves upon us to treat them as best we may. A proper understanding of the relations of this disease to society is what prompted the writing of this paper, and if you can get the idea that you are dealing with a very obstinate disease, that you are dealing with a disease that carries away thousands of people every year, and you can help a little in combating this plague, great results will be achieved.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 80, Vol. III.)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

HIBBERD, JAMES F.—Richmond (1816-1903). S. T. 1904, 356. Medical societies, and especially our State Society, were lonesome when Dr. Hibberd left this world. He was elected president of the State Medical Society in 1862, and presided in 1863, and

was chosen president of the American Medical Association in 1893, and presided in 1894. His contributions to the former were numerous, and always instructive: "Report of Committee on Medical Education," 1861, 22; "Inflammation, as Seen by the Light of Cellular Pathology," 1862, 40; "President's Address," 1863, 11; "The Liver," 1865, 30; "Bile," 1867, 56; "Pathology of Diphtheria," 1868, 17; "Progress of Medicine," 1871, 201; "Infantile Convulsions—What Should be the Treatment During the Paroxysm?" 1878, 53; "Bacteria," 1882, 179; "Post-partum Hemorrhage," 1884, 112, and 1885, 131; "Disinfectants," 1886, 53; "Myxedema—Report of a Case with Comments," 1889, 26; "Inflammation—Past and Present," 1892, 41; "Relation of Matter and Mind in Hypnotism," 1895, 306. He also made an annual report on Necrology from 1881 to 1899.

Verily, it may be said of Dr. Hibberd that he rests from his labors and his works do follow him. For biography see: Robson, 59; Stone, 216; I. M. J., Vol. xii, 23; I. M. J., Vol. xxii, 162; Am. Biog. Hist. of Eminent and Self-made Men of the State of Indiana, 1880, 6th Dist., 38.

HICKAM, WILFRED.—Spencer (1856-1904). S. T. 1905, 450.

HIGDAY, TOMPKINS.—Laporte (1820-1876). S. T. 1880, 236. Dr. Higday contributed the valuable historical article on "The Indiana Medical College, Laporte, from 1842 to 1850," Trans. 1874, 24. He was a graduate of the institution just named (1847) and filled the chair of physiology and general pathology in it from the date of his graduation until the dissolution of the school, 1850. He was twice appointed surgeon during the Civil War, but was hindered from service because of ill health.

HIGGINS, CARTER B.—Peru (1843-1894). S. T. 1895, 407. See sketch by B. R. Graham, I. M. J., Vol. xiii, 240.

HIGHMAN, LOUIS.—New Harmony (1845-1879). S. T. 1880, 227.

HILBURN, EBER W.—Washington (1837-1897). S. T. 1898, 382.

HOBBS, WILSON.—Knightstown (1823-1892). Dr. Hobbs was born at Salem, Ind., Aug. 21, 1823, and died July 24, 1892. He was a remarkable man in many respects. He touched life in all its salient points—family, school, church, citizen, soldier, doctor—and in every relation did his duty. He was faithful and active in his county and state societies. To the latter he contributed a number of papers: "Disease of the Skull; Four Operations for Removal," Trans. 1870, 101; "Chloroform and Chloral in the Treatment of Puerperal Convulsions," 1871, 51; "President's Address—Alcohol and Its Use," 1874, 1; "Counter Injuries of the Pelvis," 1876, 95; "The Medical Witness," 1877, 33; and 1878, 13; "Strangulated Hernia—Two Puzzling Cases," 1885, 46, and "Some Observations in the Treatment of Diabetes Mellitus," 1886, 70. He was assistant surgeon of the Eighty-fifth Reg. Ind. Vols. in the Civil War. He presided as president of the State Society at session of 1874. Biography, Robson, 97; also, "Personal Estimate of Dr. Hobbs as a Physician," by Dr. J. F. Hibberd. I. M. J., Vol. xi, 49; ob. ib., 55.

HORNBROOK, WILLIAM P.—Union (1828-1883). S. T. 1884, 211.

HORNE, John.—Yorktown (1814-1880). S. T. 1881, 240.

HORNE, SAMUEL S.—Jonesboro (1843-1908).

HOWARD, ELIJAH J.—Hazelton (1831-1882). S. T. 1883, 269.

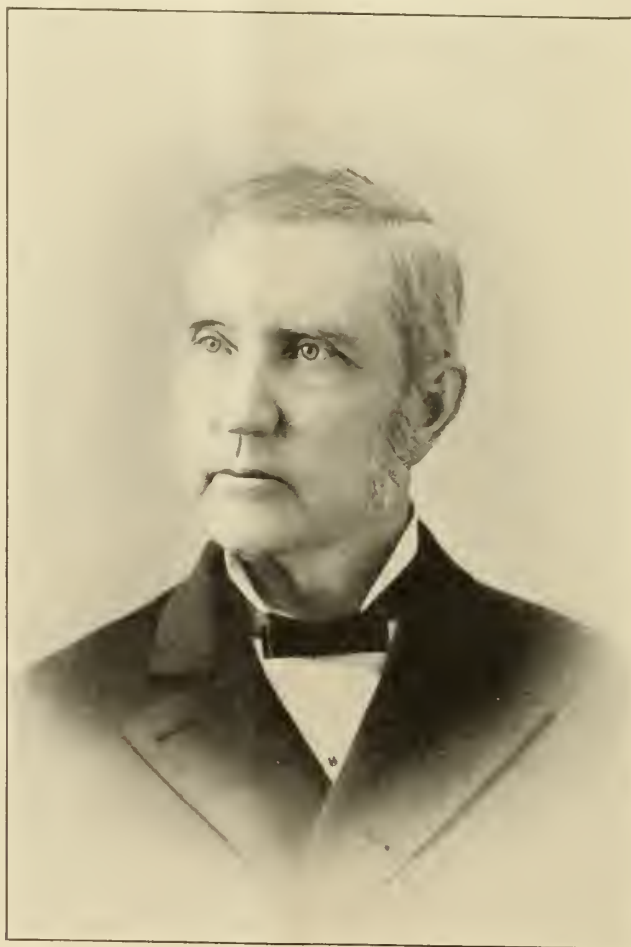
HOWARD, NOBLE P., SR.—Greenfield (1822-1895). S. T. 1896, 254. Born in Wayne county, Ohio, Sept. 11, 1822, and came to Brookville in 1836. Was assistant surgeon of the Twelfth Reg. Ind. Vols. in the Civil War. Died Aug. 25, 1895.

HUDLESON, LUCIUS R.—Milroy (1861-1905). S. T. 1906, 500.

HUGHS, JOHN.—Dearborn county (1816-1880). S. T. 1880, 245.

HUMPHREYS, LOUIS.—South Bend (1816). Born in Springfield, Ohio, Sept. 21, 1816. First practiced at

HUTCHINSON, DAVID—(Formerly Mooresville) (1812-1891). Dr. Hutchinson was born in Lesmehaga, Scotland, in 1812, and came to America in 1820. He had begun the study of medicine in the city of Glasgow. He then came to the United States, and at Cincinnati, Ohio, he continued his studies under Dr. Judkins. He completed his course and graduated from the Medical College of Ohio. He commenced the practice of medicine at Steubenville, Ohio. From there he moved to Shelbyville, Ind., and married at that place. He then moved to Putnamville, Putnam county, Indiana; and from there to Mooresville, Indiana. He practiced there until he was commissioned by Governor Morton, on Dec. 12, 1862, Military Agent at Nashville, Tenn., to look after the condition and welfare of the



JAMES F. HIBBERD.

Laporte, and removed to South Bend in 1844. He entered the military service in 1861 as surgeon of the Twenty-ninth Reg. Ind. Vols. In 1878 was elected president of the State Society, but later resigned. He has contributed to State Transactions a "Report on the Interchange of Published Transactions," 1858, 34, and "Conservative Surgery," 1878, 60. For biography see Robson, 109.

HUNT, TIGHELMAN.—Plainfield (1838-1906). S. T. 1906, 496.

HUNT, WILLIAM A.—Anderson (1822-1889). S. T. 1889, 214.

Indiana Regiments in the field, and especially the sick and wounded in the hospitals belonging to the State of Indiana. On March 21, 1863, he was commissioned by Governor Morton, surgeon of the Thirtieth Regiment, Indiana Infantry, and served as such until August 8, when he was discharged from the service on account of disability, at Winchester, Tenn., and returned to his home at Mooresville, Ind. He wound up his business there and removed to Winterset, Madison county, Iowa, in September, 1863, and practiced medicine, and conducted a drug business until April, 1889. He then moved to Council Bluffs, Iowa, so as to be with his

children, and practiced his profession until his death, March 31, 1891. His remains were taken back to Winterset, Iowa, and buried in the family lot, on April 2, 1891. His last sickness being of about two weeks' duration, and died at nearly eighty years of age. He was an active member and worker in the Presbyterian church.—D. J. Hutchinson, son, Council Bluffs, Iowa.

He was elected president of the State Society in 1859, presiding in 1860. He contributed the following papers to the society (See Transactions): "Report on Microscopic Pathology, 1856, 37. "Report on Microscopy," 1858, 28. "President's Address," 1860, 13. "Report on the Advances of Uterine Pathology and Therapeutics," 1862, 35, and "Fevers of Indiana," 1864, 29. He was the recipient of the Fiske Fund Prize Essay on "Stomatitis Materna," June 3, 1857: "What Are the Causes and Nature of That Disease Incident to Pregnancy and Lactation Characterized by Inflammation and Ulceration of the Mouth and Fauces, Usually Accompanied by Anorexia, Emaciation and Diarrhea: and What is the Best Mode of Treatment." Published in the Am. Jour. Med. Sci., Vol. xxxiv, 369 (18 pages, October, 1857.—G. W. H. K.

INLOW, JOHN J.—Manila (1826-1896). S. T. 1896, 263.

INSLEY, WILLIAM Q.—Terre Haute (1827-1880). S. T. 1881, 233.

IRWIN, LUTHER M.—Lafayette (1855-1903). S. T. 1904, 357.

IUTZI, JOSEPH.—Richmond (1846-1902). S. T. 1903, 345. He contributed an interesting article on "Hereditry and Its Relation to Disease," Trans. 1882, 136.

JACKMAN, FRANK.—Milroy (1855-1884). S. T. 1885, 217.

JESSUP, ROBERT B.—Vincennes (1828-1893). He was surgeon of the Twenty-fourth Reg. Ind. Vols., later a brigade surgeon, and later division surgeon under Gen. A. P. Hovey. In 1891 he was appointed Surgeon General of Indiana by Governor Hovey. See I. J. M., Vol. xii, 249.

JEWETT, LUTHER.—Lafayette (1805-1872). He practiced medicine in Lafayette about thirty-seven years. Obit., I. J. M., Vol. iii, 297.

JOBES, GEORGE O.—Indianapolis (1823-1906). I. M. J., Vol. xxiv, 359.

JOHNSON, CHARLES S.—Fountain County (1824-1885). S. T. 1886, 209.

JOHNSON, LEMUEL R.—Cambridge City (1824-1889). Robson, 629. He has contributed an article, "Abstract of Reports Presented to the Cambridge City Medical Association." Trans. 1856, 34; also, "Thoughts on Asiatic Cholera," Trans. 1866, 46.

JOHNSON, NATHAN.—Cambridge City (1794-1872).* Dr. Johnson was born in Loudoun county, Virginia, Dec. 14, 1794. He graduated at one of the medical schools of Philadelphia in 1835, and located in Cambridge City in 1836. Here he practiced medicine for thirty-five years, when the lot of the practitioner was a hard one. He was present at the formation of the State Medical Society, in June, 1849. At the session of 1858 he was elected president of the state society, and presided in 1859, but delivered no address. "Dr. Johnson was not only an influential physician,

much honored in his profession, but he was a great factor in the abolition movement of those earlier times; a great admirer of William Lloyd Garrison, Wendell Phillips, John Whittier, and others of the same school. Many times he has entertained Frederick Douglass in his own home, as he came west, making speeches in behalf of 'My People.' He lived to see the slave liberated—one of the greatest joys of his declining years."—Letter from Mrs. Clarissa Johnson Hall, a grand daughter.

JOHNSON, THOMAS W.—Marion (1838-1894). S. T. 1895, 414. Was a first lieutenant in the First Wis. Cav. Reg. Later was assistant surgeon Sixth Mo. Cav. Reg., and still later was in charge of the general hospitals at Ironton, Mo., and general prison hospital at Alton, Ill.

JONES, CALEB V.—Covington (1812-1883). S. T. 1884, 213. Was surgeon of the First Reg. Ind. Vols. in the Mexican War, and surgeon of the Sixty-third Reg. Ind. Vols. in the Civil War. He located in Covington in 1840, and was the first president of the Fountain County Medical Society (1867). See this JOURNAL, Vol. ii, pp. 291, 422.

JONES, HIRAM G.—Evansville (1824-1884). S. T. 1885, 215.

JONES, ROBERT E.—Indianapolis (1847-1891). S. T. 1892, 284.

JONES, T. B.—Lynnville (1841-1902). S. T. 1903, 346.

JORDAN, DEWITT.—Coxville (1871-1901). S. T. 1902, 416.

JOSSE, JOHN M.—Ft. Wayne (1818-1880). S. T. 1880, 231. Dr. Josse was born in Germany, July 17, 1818. He was a graduate from Heidelberg in 1843. He was engaged with Carl Schurz and Franz Sigel in the German rebellion in 1848, and fled with them to America. He located in Ft. Wayne in 1855, where he remained until his death, April 30, 1880. He was surgeon of the Thirty-second Reg. Ind. Vols. Dr. Beek has contributed a beautiful tribute to his memory in the Transactions named.

JUDKINS, ELAM I.—Greenfield (1830-1890). S. T. 1890, 167.

JUMP, SAMUEL V.—New Burlington (1822-1887). S. T. 1888, 204. See also Am. Biog. Hist. of Eminent and Self-made Men of the State of Indiana, 1880, Sixth Dist., 44. In 1869 he represented his county (Delaware) in the State Legislature. He was active in the formation of the Delaware County Medical Society in 1865.

JUSTICE, JOHN H.—Greenfield (1854-1902). S. T. 1903, 347.

KAPPEL, JOHN H.—Ft. Wayne (1870-1898). S. T. 1899, 397.

KAUTZ, JOHN.—Dora (1834-1907). I. M. J., Vol. xxv, 450. Was a soldier of the Civil War.

KEEGAN, CHARLES J.—Millersburg (1832-1907). S. T. 1907, 495.

KELSEY, JEREMIAH S.—Converse (1842-1893). S. T. 1894, 220.

KELSO, REESE D.—Waveland (1866-1896). S. T. 1897, 349.

KEMPF, E. J.—See I. M. J., Vol. xxiii, 331.

KEMPF, MATHEW.—Ferdinand (1827-1880). S. T. 1881, 231. Born in Germany, and came to Indiana when three years old. Was demonstrator of anatomy

* He was the father of Dr. Lemuel R. Johnson, and grandfather of Hon. Henry U. Johnson, of Richmond, ex-congressman.

for a time in the University of Louisville. Member of the Indiana Legislature in 1859. Wrote on various scientific subjects, especially those relating to ethnology. A lecture on the "Wandering Cainidae, or the Ancient Nomads," delivered to the medical society of Dubois county, April 22, 1879, ranks high in that class of literature.

KEMPF, PAUL H.—Ferdinand (1861-1896). S. T. 1897, 344.

KENNEDY, SAMUEL A.—Shelbyville (1835-1900). I. M. J., Vol. xix, 122.

KESSINGER, ELLIS M.—Sandborn (1857-1905). S. T. 1905, 451. "His death was due to an infection received while treating one of his patients, while performing an operation, for which he did not expect, nor did he receive one cent of remuneration."—Dr. W. E. Kessinger.

KETCHAM, JOHN D.—Tunnelton (1865-1900). S. T. 1901, 490.

KINDERMANN, ALEXANDER.—Eugene (1858-1905). S. T. 1905, 452.

KING, ENOCH W.—New Albany (1846-1882). S. T. 1882, 270. Dr. King was an enlisted man in the Sixty-sixth Reg. Ind. Vols., and was severely wounded in the right lung at Resaca, Ga., May 15, 1864. He collected and arranged two valuable articles on "Statistics of Placenta Prævia," which he read before the State Medical Society, Transactions 1879, 43, and 1881, 168.

KING, WILLIAM F.—Centerville (1824-1892). S. T. 1892, 290. Was, at first, assistant surgeon of the 124th Reg. Ind. Vols., and later promoted to surgeon of the 147th Reg. Ind. Vols., serving until the close of the war.

KNEPFLER, NATHAN.—Indianapolis (1803-1859). S. T. 1859, 46. Born in Arad, Hungary, October, 1803. In 1853 he immigrated to the United States, and located the same year in Indianapolis. He was a member of the State Medical Society, and at the session of 1858 made a "Report on the Uses and Abuses of Mercury." Trans. 1858, 36.

Dr. Knepfler was a scholar, being familiar with Latin, Greek, Hebrew, Hungarian, German, French, Italian, and to a less extent, English. He loved the society of scholars of the class of Dr. Parvin. He was a Jew, and he clung with great tenacity to Moses and the Prophets; at the same time he was charitable to other faiths, and saw in Christ the most Divine of prophets, but still could not believe Him to be the Messiah promised Israel. Family bereavements came heavily upon him, and while visiting a son at Shelbyville, Ky., he died at that place, Jan. 10, 1859.—From an obituary notice by his friend, Dr. Parvin, Trans. 1859, 46.

LAMB, JAMES.—Aurora (1818-1894). S. T. 1894, 227.

LAMMERS, FRANK H.—Greencastle (1864-1900). S. T. 1900, 326. I. M. J., Vol. xviii, 436.

LARKIN, JOHN B.—Mitchell (1833-1901). S. T. 1902, 417.

LARUE, BENJAMIN.—Portland Mills (1848-1891). S. T. 1891, 285.

LASH, HUGH M.—Indianapolis (1844-1903). S. T. 1904, 358. He was a native of Ohio, and first practiced at Athens, in that state. Located in Indianapolis in 1890. At the time of his death he was a member of the City Board of Health, and was lecturer on the physi-

ology of the nervous system and clinical psychiatry, in the Medical College of Indiana. For several years prior to death he had given most acceptable clinical lectures at the Central Hospital for the Insane. He was a frequent contributor to medical journals, and contributed an article to the state society in 1892, on "Cerebral Localization," Trans. 1892, 150. See biographical sketch in I. M. J., Vol. xxii, 159. Also, "An Appreciation Prepared by Dr. Theodore Potter," on same page. Also, memorial resolutions at a called meeting of the Indianapolis Medical Society, Sept. 19, 1903, ib. 161. Portrait facing October number of same journal.

LATTA, MILTON M.—Goshen (1822-1899). S. T. 1900, 328. It is claimed for Dr. Latta that he performed the first vaginal hysterotomy in the state of Indiana. At an early date he performed successful ovariectomies that would reflect credit on the surgeon of to-day with our advanced ideas and technique of modern surgery. He contrived a number of surgical appliances, and suggested some improvements in combining nitrite of amyl and chloroform as an anesthetic. In November, 1870, he removed a multilocular tumor which weighed sixty-one and a half pounds. The young woman made a good recovery. Ind. Jour. of Med., Vol. i, 292. See Robson, 548. See his reminiscences of a half century, I. M. J., Vol. xi, 20.

LAWDER, WILLIAM G.—Brooksbury (1841-1890). S. T. 1891, 281.

LAWRENCE, AMOS O.—Indianapolis (1849-1879). S. T. 1880, 239.

LEATHERMAN, JOSEPH H.—Valparaiso (1819-1886). S. T. 1886, 214.

LENNOX, FRANK.—Marion (1849-1892). S. T. 1892, 287.

LESLIE, ALEXANDER.—Petersburg (1815-1887). S. T. 1888, 201.

LEWIS, GEORGE C.—Madison (1855-1907). S. T. 1907, 488.

LIGHT, AMOS B.—North Vernon (1843-1901). S. T. 1902, 418.

LINGLE, RICHARD W.—Orleans (1838-1901). S. T. 1902, 419.

LINN, TIMOTHY T.—Bourbon (1831-1896). S. T. 1896, 273.

LINNVILLE, LEWIS M.—Columbia City (1860-1896). S. T. 1896, 274.

LINTON, SAMUEL M.—Columbus (1809-1889). S. T. 1890, 159. Was president of the State Society in 1864. See this JOURNAL, Vol. ii, p. 244. See ob., I. M. J., Nov. viii, p. 180.

LITTLE, H. A.—Linton (1871-1899). S. T. 1900, 329.

LOMAX, CONSTANTINE.—Marion (1814-1884). S. T. 1885, 214.

LOMAX, WILLIAM.—Marion (1813-1893). S. T. 1893, 259. Was born in Guilford county, North Carolina, March 15, 1813, and died at Marion in 1893. He was a graduate of the University of New York. At the beginning of the Civil War he was appointed surgeon of the Twelfth Indiana Infantry, and later, medical director of the Fifteenth Army Corps.

He was elected president of the Indiana State Medical Society in 1855 and presided in 1856. In 1866, when it was changed into a delegated body, he took an active part in the plan of reorganization. He was a

faithful attendant at the sessions of the society and a frequent contributor of valuable articles: "Observations of Meteorological Facts in Connection with Diseases," Trans. 1851, 7; "Report on Surgery," 1858, 23; "Responsibility of Physicians and the Objects and Duties of the Indiana State Medical Society," 1871, 97; "Two Cases of Perityphlitis," 1877, 91; "A Case of Ovariectomy and Recovery," 1880, 108; "Injury of Head with Fracture of Skull," 1880, 134; "Case of Delivery by Embryotomy Without the Use of Cutting Instruments," 1882, 49; "Chronic Alcoholism," 1885, 27.

At the present day, when the term "perityphlitis" has given way to "appendicitis," it is interesting to turn back one-third of a century and read the paper of Dr. Lomax on perityphlitis. Briefly, the report is as follows: In September, 1874, he was called to see a young man suffering from a pain in the "right iliac fossa." He died in great pain a few days later. Dec. 30, 1875, he was called to the same home to attend a brother of the deceased, who was suffering in a similar manner, and this brother died on the fourteenth day. A post-mortem examination of the latter revealed "an abscess beneath the cecum, walled in by adhesions." How familiar the term, *walled in by adhesions* sounds a third of a century after Dr. Lomax penned it! He says further: "There was not the least trace of appendix vermiformis to be found, nor opening in the intestine through which this substance could have forced its way." His paper is interesting as showing the natural history of a case of appendicitis.

For a time he held the chair of surgery in the Fort Wayne Medical College. He held the position of president of the board of trustees of the Medical College of Indiana for several years, and a short time before his death made a gift in property to that college that was valued at more than fifty thousand dollars.

Dr. Lomax lived and died a true type of a noble physician and a Christian gentleman. Stone, 284. Also I. M. J., Vol. xi, 373, with portrait, and Jour. Am. Med. Assoc., Vol. xx, 614.

LONG, JEREMIAH H.—Terre Haute (1821-1880). S. T., 1881, 237.

LOVETT, JOHN A.—Goodland (1839-1903). I. M. J., Vol. xxii, 123.

LUMMIS, JOSEPH E.—Maxwell (1866-1898). S. T. 1899, 385.

LYONS, LEWIS D.—Attica (1816-1888). S. T. 1888, 215.

McCLURE, DAVID.—Jeffersonville (1815-1896). S. T. 1896, 268.

McCLURE, JESSE D.—Jeffersonville (1855-1885). S. T. 1886, 206.

McCOY, WILLIAM A.—Madison (1843-1904). S. T. 1904, 359.

McCOY, WILLIAM N.—Jeffersonville (1833-1892). S. T. 1892, 291.

McCULLOCH, JAMES.—Muncie (1813-1877).

McCULLOUGH, HOWARD.—Fort Wayne (1858-1892). S. T. 1892, 285.

McDANIEL, CORNELIUS W.—Washington (1823-1880). S. T. 1881, 232.

McFADDEN, WILLIAM G.—Shelbyville 1834-1907). A native of Pennsylvania; he came to Indiana in early life. He began practice in Shelby county in 1856. Was commissioned surgeon of the Seventy-ninth Reg. Ind. Vols. in the Civil War. In the battle of Chickamauga he was a brigade surgeon, and on the

second day, Sept. 20, 1863, while caring for wounded soldiers, was captured and taken to Libby prison, where he remained three months. After the war he located in Shelbyville, where he remained in active practice until a short time previous to his death, which occurred at Daytona, Fla., April 20, 1907. See I. M. J., Vol. xxv, 448.

McGAUGHY, ANDREW J.—Linton (1855-1904). S. T. 1905, 453.

McKINNEY, GEORGE W.—Marion (1849-1902). S. T. 1903, 348. Twenty-five years before his death he wrote a paper in which he claimed the identity of diphtheria and croup.

McKINSTRY, JOHN F.—Jonesboro (1842-1882). S. T. 1883, 271.

McLEOD, ANGUS J.—Columbus (1827-1898). S. T. 1899, 384.

McMAHAN, SAMUEL W.—Indianapolis (1847-1901). S. T. 1902, 420.

McMEHAN, JAMES G.—Crawfordsville (1808-1899). I. M. J., Vol. xviii, 48.



JOSEPH W. MARSEE.

McNARY, CHARLES E.—Fillmore (1841-1880). S. T. 1881, 234.

McPHEETERS, JOHN G.—Bloomington (1811-1888). S. T. 1888, 212.

McSHANE, JOHN T.—Indianapolis (1847-1907). S. T. 1907, 502. Dr. McShane practiced his profession for about sixteen years in Indianapolis. He had achieved success and stood high as a practitioner and citizen. He was a frequent contributor to medical journals. See Stone, 310, I. M. J., Vol. xxv, 498. Portrait same page.

McSHIRLEY, JAMES L.—Sulphur Springs (1860-1906). S. T. 1907, 485.

MALONE, JOHN A.—Princeton (1837-1893). S. T. 1893, 257.

MAPES, SMITH H.—Indianapolis (1840-1901). I. M. J., Vol. xix, 317.

MARKLE, JOHN E.—Winchester (1838-1903). He was a practitioner of medicine in Winchester from 1874 until his death. During the Civil War was 2nd lieutenant.

and promoted to 1st lieutenant, Co. K, of the Thirty-fourth Reg. Ind. Vols. See I. M. J., Vol. xxi, 483.

MARR, DELOS D.—Chesterton (1852-1889). S. T. 1890, 156.

MARSEE, JOSEPH W.—Indianapolis (1848-1898). S. T. 1899, 399. Dr. Marsee ranked with the great surgeons of the country. He was an excellent anatomist, and this knowledge, combined with rare mechanical tact, made him eminently skilful as a surgeon. He was preeminently a teacher and lecturer. He was not disposed to write much, but what he did was practical. On Feb. 11, 1896, he delivered an informal address before the Marion County Medical Society, which was published in the Indiana Medical Journal, Vol. xiv, 349, entitled "The Treatment of Common Injuries of the Hand." This article is well illustrated, and is still read with interest at the present day. In 1894 he read a paper before the State Medical Society, "A Contribution to the Treatment of Fractures of the Femur," Trans. 1884, 194. For some years previous to his death he was professor of surgery and dean of the Medical College of Indiana. He had also filled other positions in the college and city hospitals. For biographical, see I. M. J., Vol. xvii, 225. Drs. Wynn and Morrison pay a beautiful tribute to his memory in Transactions for 1899, 399-400.

MARSHALL, DANIEL M.—Columbia City (1823-1892). S. T. 1893, 250. Dr. Marshall left one son who is the present governor of our state, Thomas R. Marshall.

MARTIN, JOHN H. L.—Arcadia (1850-1885). S. T. 1886, 208.

MARTIN, SAMUEL M.—Greenfield (1842-1897). Was a soldier of the Civil War. I. M. J., Vol. xvi, 32.

MASON, CHARLES R.—Hartford City (1846-1906). S. T. 1906, 490.

MAVITY, JAMES S.—Fowler (1845-1901). S. T. 1901, 491. I. M. J., Vol. xix, 486.

MAXWELL, JAMES D., SR.—Bloomington (1815-1892). S. T. 1894, 214. Dr. Maxwell was in practice at Bloomington for nearly fifty years. He was a trustee of Indiana University for nearly forty years, and rendered valuable service to the cause of general education. See Robson, 142; Stone, 657. I. M. J., Vol. xi, 119.

(To be continued.)

CONGENITAL HEART DISEASE.*

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These are infrequent and most usually complicated. They occur most frequently in the right heart, upon which the most work is thrown in intrauterine life. The subject is divided into four heads:

1. Developmental errors.
2. Fetal endocarditis, which is nearly always sclerotic, rarely verrucose.
3. Fetal myocarditis, or

4. Adult endocarditis developing upon fetal anomalies.

Developmental errors are the most frequent. Edwards says: "They are most frequently seen in male children, and hereditary tendency seems to play some part occasionally."

Before entering upon the subject of this paper in detail, it might be well to review the embryology of the heart. Thus it is one of the first organs to develop (about the twelfth day). It arises from on the margin of the yolk sac while the embryo is still spread out. It arises as two separate tubes that are formed by the folding of the visceral mesoblast near the margin of the embryonic area. This process of folding in produces two elevations on either side of the median line, which coalesce and fold into the primitive body cavity, and are known as the heart tube. Each fold is divided into two layers, the outer myocardial layer, the inner or endocardial layer, the myocardial layer being the thicker and gives rise to a portion of the heart muscle. The endocardial layer being thinner, consists of a single layer of cells (mesoblastic) surrounded by the muscle layer, but is separated by a distinct space.

When the gut-tube begins to constrict from the vitelline sac, and the associated splanchnopleuræ of the two sides draw together, the heart tubes, first wide apart, are drawn into approximation in the median line beneath the ventral surface of the primitive pharynx in advance of the yolk sac. At first the individual tubes remain separate; finally the endothelial layers fuse and the myocardial walls blend and a single heart tube is formed.

For a while the heart tube retains its cylindrical form and in the median line, but after a while its increasing length causes it to become bent upon itself like a letter S, the venous end lying below and to the left, the arterial above and to the right, the median portion first bending downward and then upward and to the left in the oblique, this being the primitive ventricle. The early sigmoid heart suggests the recognition of an arterial, ventricular and venous segment.

During the further development of the heart, rearrangement of these three divisions takes place, the venous segment originally below and in front gradually acquires a position above and behind, while the ventricle rotates to the front and below. With the completion of this rotation, a deep groove appears between the primitive ventricle and venous chamber, that indicates the position of a contracted passage of the auricular canal. At the same time that the upper venous segment is undergoing this change, there is a pouching outward of the auricular chamber on

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 8, 1909.

each side of the truncus arteriosus; these expansions are the auricular appendages. These rapidly increase in size until they occupy the most conspicuous portion of the young heart; they embrace the truncus arteriosus and overlie the ventricles.

Meanwhile, the ventricular segment has assumed the most dependent and ventral portion and appears as a transverse expanding sac and resembles a greatly dilated stomach, the truncus arteriosus adjoining the pylorus and the contracting auricular band representing the esophagus. Soon the higher or ventricle end sinks to the same plane as the esophagus. This causes the ventricle to lose in width, but to gain in height, thus causing the appearance of the intra-ventricular groove, suggesting the appearance of the division into a right and left ventricle, at the same time indicating the position of the ingrowing septum that leads to the intraventricular separation. Sections of the young heart show the venous and ventricular segments as widely communicating portions of the sigmoid tube, the walls of which are composed of myocardial and endothelial layers.

The myocardial layer of the heart wall, especially in the ventricle, also shows the beginning of the trabeculae that invaginate the endothelial lining and leads to the conspicuous modeling of the adult heart. At about the same time (fourth week) there is a division of the ventricular and the auricular chambers by the outgrowth from the upper auricular, middle valvular and lower ventricular part, supplemented by the aortic septum which appears in the truncus arteriosus and divides it into the pulmonic and systemic aorta. The auricle precedes the ventricle, and is divided by a downward extension of the auricular septum descending to meet the valvular septum from below. The interauricular septum is not complete, as in its upper portion there remains an opening (foramen ovale) through which the blood flows from the right to the left auricle during intrauterine life.

The separation of the ventricular chamber begins somewhat later. It grows from the posterior walls in a crescentic projection and corresponds with the intraventricular groove and fuses with the septum intermedium. The septum above is not as complete as the portion above and in front. This deficiency is, however, overcome by a downward extension of the aortic septum within the bulbus arteriosus, which portion always remains thin and is seen as a thin membrane in the adult heart.

The rarity and the obscurity of the etiology and symptoms—and at times the cases are of seri-

ous clinical importance—makes the subject of greater importance. It has attracted the attention of some of the ablest workers in cardiac pathology. There are special contributions from nearly all the early writers upon the heart—Morgagni 1761, William Hunter 1784, Meckel 1802, Louis 1826, Farré 1814, and many others. The first comprehensive study of the whole field and review of the early literature was by Peacock in 1858-1866 in "Malformations of the Human Heart." This was and is to-day the leading authority in England. In 1898 Vierordt gave an extensive statistical study that is of great value. Thorel in 1903 brings the subject almost up to date. In "Allbutt's System of Medicine," vol. vi, there is a most excellent account given.

But with all the literature the three questions are probably not yet answered: "Osler's Modern Medicine" (Abbott) says:

"1. What is the cause of the defect? Is it developmental or due to intrauterine disease?"

"2. What is the cause of the cyanosis so often present? Is it due to the mixture of the venous and arterial currents; or due to venous congestion; or to delayed aeration of the blood; or to still more obscure causes lying perhaps in tissue metabolism and in the chemical composition of the blood itself?"

"3. In cases in which a defect of the interventricular septum is combined with stenosis of the pulmonary artery, which is the primary lesion? Is the septal defect secondary, due to the rise of pressure in the chamber behind the stenosed orifice before the closure of fetal passage had occurred, or is it primary, the deflection of the current of blood through the defect leading to hyperplasia of the pulmonary artery through disease? Or are both conditions the result of a common cause, an arrest or irregularity in the development of the parts?"

The cause of congenital heart disease may be divided into two classes:

1. Due to arrest of development.
2. Due to disease of the fetus *in utero*.

For the arrest of growth *in utero*, search has been made from the very earliest times for some explanation of the existing fact. Does the defective heart happen as a coincidence singly, without a defect in some other part of the organism, or is it due to amniotic adhesions, uterine disease or a hereditary predisposition?

In the study of 700 cases Vierordt found associated anomalies in 80 and concluded it impossible to regard their presence as accidental. In Abbott's article in "Osler's Modern Medicine" 412 cases are analyzed and other defects are

found in 12 per cent. of the cases. Ewall Luyken, in an analysis of 74 cases of congenital cystic kidney, found cardiac disease four times. A combination of mental deficiency and alternation in temperament is not uncommon.

Linch reports dumbness from birth, four of idiocy; on the other hand, they may be bright and of normal intelligence. Personally I know a girl of 8 years, a twin, has a congenital heart lesion, has had two mild attacks of cyanosis in the past two years, whose mental condition, I should say, is normal.

Possibly the disagreeable things of pregnancy, fright, baneful influence, syphilis, severe ileus, nephritis, etc., might be influential in producing the malformation. Inter-marriage has been noted by Gerhardt and Eger.

Fetal disease, lues, may play some important part, or any inflammatory process might cause a faulty development or heart disease *in utero*. Of this class of cases, pulmonary stenosis is the most common.

Symptomatology.—When well marked, the symptoms of congenital cardiac disease are very impressive, and when, in spite of infantile cardiac disease, the child survives infancy, there is stamped on them the mark which in the majority of cases is everlasting. First the symptoms in infancy, then in childhood, must be considered. We are justified in making this distinction, for Carr states the majority of them die under two years of age.

1. The infants are usually quiet and listless, often small and puny. The nature of the complaint may be overlooked for months unless it has an attack of cyanosis.

2. The symptoms in older children are somewhat the same, but more indelible markings are made by the clubbing of the fingers, toes and nose, when cyanosis is not present.

Cyanosis is the most important and most frequent symptom and is a subject of much debate in regard to the true cause. In "Osler's Modern Medicine" there are no less than five theories advanced as an explanation of the phenomena. Theory of:

1. Venous stasis, advanced by Morgagni, supported by Louis, Niemeyer, Peacock and others, and that it was absent in patients whose right ventricle had hypertrophied sufficiently to overcome the pulmonary stasis and allow the blood to be properly oxygenated.

2. Due to mingling of venous and arterial blood, suggested by Meckel, Bosellard, Farré, Paget and others. This theory was refuted by Peacock and others. One case in the literature points that this theory does not hold good. In a

case where the left subclavian arose from the pulmonary, yet the arm was normal and not discolored.

3. The theory that a variety of causes, including venous stasis and mingling of the blood currents, cause deficient oxygenation, causes cyanosis as advanced by Lees.

4. The theory is advanced by Carpenter that there is a pulmonary obstruction due to the formation of new capillaries and connective tissue, especially in the lungs.

5. The theory of viscosity that the blood in these cases is changed, that is, the specific gravity is increased, may be as high as 1077 and hemoglobin increased to 130. Red cells may be increased from 6,000,000 to 10,000,000. The staining properties of the blood are also changed; the cells staining more deeply is now a well-known fact.

But with all these theories it seems that cyanosis could only be caused by some fault with the pulmonary circulation which does not allow sufficient aeration of the blood stream, and allows it to become loaded with CO₂, thus producing cyanosis.

Diagnosis.—Cyanosis of congenital heart disease must be differentiated from other cyanosis. Stockvitz has called attention to a class of cyanosis called "enterogenous cyanosis," in which the blood is changed in color, it is believed, by hydrogen sulphid or other toxic substances acting on the hemoglobin. The polycythemia of splenomegalia must be differentiated from congenital cyanosis.

Under the head of congenital heart disease we must include the anomalies of the structure as well—"Osler's Modern Medicine" (Abbot).

1. We take up anomalies of the pericardium. First, rare and of no clinical importance. (Three cases of complete absence are reported.)

2. Displacements of the heart.

1. Ectopic cardia.

a. In abdomen (1 case).

b. In the neck (5 cases).

c. Entirely out of the body.

d. Dextro cardia (displaced in the thorax), 7 cases.

3. Anomalies of the heart.

1. Bifid apex, where both ventricles project beyond the intraventricular groove, shows the remains of the tubular heart of early fetal life (8 cases).

2. Diverticula of the heart (2 cases reported).

3. Congenital hypertrophy (3 cases).

4. Anomalies of the septa (18 cases reported).

5. Defects in the interauricular septum.

Out of 412 cases the foramen ovalæ was patent 134 times. Zahn found in 711 adults the foramen open 139 times, and 35% of them were over 40 years of age. Adami found the foramen open 199 times, or 14.5 per cent., out of 1,374 autopsies. Of these openings of the foramen, there was a majority that were only small slits or the opening was guarded by a membrane. In 52 of these defects there were other defects, and in 26 of them was pulmonary stenosis or atresia.

6. Defects in the interauricular septum below near the apex rare (7 cases reported).

Symptoms of a defective foramen ovale can exist for many years without causing cyanosis, thus refuting the theory of the admixture of arterial and venous blood causing cyanosis.

There has been reported a case of complete absence of the intra-auricular wall. This patient lived to the age of 39 years. Physical signs are frequently absent in these cases of defect cordi.

Diagnosis:

1. Cardiac hypertrophy.
2. Thrill over area (presystolic in time).
3. Murmurs (systolic and presystolic).
4. In small patency of the foramen a harsh systolic murmur is heard over the second, third or fourth interspace. At times it may be heard over the entire cardiac area and is not transmitted along the pulmonic.
5. In the absence of tricuspid insufficiency and mitral regurgitation the patent foramen will sometimes give a venous pulse in the neck. Edwards says this is not pathognomonic. Premature closure of the foramen has been noted.
8. Defects of the base occurred 149 times out of 412.
9. Defects of the interventricular septum. Most frequent in the region of the undefended space openings, vary greatly in size. Both ventricles are frequently hypertrophied, murmurs are of varied quantity, whistling, grating, sawing and blowing are heard most any place over the precordial area, may be heard behind, but usually not in the axilla. There may be a precordial bulging.

Next in importance is stenosis of the pulmonary tract. Vierordt reported 130 cases in his

series. If these people survive infancy they die early of pulmonary tuberculosis, though they are very susceptible to any infection (pulmonary) due to the lack of blood supply.

This concludes the more important congenital disease of the heart, and for a further investigation I refer to articles referred to in the beginning of the paper.

Diagnosis depends upon the following points:

1. History.
2. Youth of the patient.
3. Character of the cyanosis.
4. The presence of atypical physical finding and signs.

Prognosis varies with the pathology of the case. Slight defects have lived to a good age of 65 years.

Vierordt gives the average age in pulmonary stenosis as nine years. Atresia of the aorta as three years.

Treatment varies: hygienic, warm clothing, proper diet, administration of oxygen during the attack of cyanosis.

SPECIAL ARTICLE

ADMINISTRATION OF THE SALTS AND PREPARATIONS OF INORGANIC IRON.

W. H. FOREMAN, A.B., M.D.
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AND

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The difficulties in the administration of inorganic iron arise:

1. From a lack of knowledge of the composition and properties of the various salts and preparations of inorganic iron (see previous paper).
2. From a lack of knowledge of the proper combinations of inorganic iron with adjuvant and corrigent drugs.

As a consequence an examination of a number of prescriptions for iron shows that in a large per cent. ready-made proprietaries have been prescribed. Especially is this true for organic iron preparations, the efficiency of which in most instances is inferior to inorganic iron, not taking into consideration the excessive cost of such preparations with its unnecessary and useless financial loss to the patient.

There are a number of valuable U. S. P. salts and preparations of inorganic iron (see previous paper) which the physician may prescribe, and

which meet most of the indications in practice, and which by the exercise of care may be combined with necessary adjuvant and corrigent drugs.

I. This is well illustrated by the combination of iron with cathartic drugs. It should be remembered that all preparations of inorganic iron have a more or less constipating effect. To overcome this undesirable action and still maintain the desirable effect, the iron is combined with laxative and cathartic drugs as corrigents. The Pharmacopeia recognizes this in its *pilula aloes et ferri*. The following prescriptions illustrate the same principle:

R.		
Ferri carbonatis saccharati	2.600	gr. xl
Hydrargyri chloridi mitis	0.065	gr. i
Aloes purificatæ	0.650	gr. x
Sacchari lactis	2.000	gr. xxx

Misce et fiat pulveres No. X (in oiled paper).

R.		
Ferri sulphatis exsiccati	1.300	gr. xx
Resinæ podophylli	0.065	gr. i
Sacchari lactis	2.000	gr. xxx

Misce et fiat pulveres No. X.

R.		
Massæ ferri carbonatis	2.600	gr. xl
Extracti rhamni purshianæ	1.000	gr. xv

Misce et fiat pilulæ or capsules No. X.

The pharmacopeial liquid preparations of rhubarb, aloes, senna and cascara are miscible with the liquid and soluble preparations of iron without any important incompatibilities. For example:

R.		
Ferri et ammonii citratis	10.000	5iiss
Syrupi rhei aromatici	30.000	5i
Aquæ q. s. ad.	120.000	5iv

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day after meals.

R.		
Tincturæ ferri chloridi	15.000	5iv
Fluidextracti rhamni purshianæ aromatici	8.000	5ii
Aquæ q. s. ad.	90.000	5iii

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day after meals.

Excellent examples of the combination of iron with saline cathartics are found in the various alkaline chalybeate mineral waters, examples of which are Vichy, Apollinaris, Carlsbad.

Similar simple combinations may be artificially prepared. For example:

R.		
Ferri sulphatis	1.600	gr. xxiv
Acidi sulphurici aromatici	15.000	5iv
Magnesiæ sulphatis	120.000	5iv
Aquæ q. s. ad.	240.000	5viii

Misce et fiat solutio. (Dorsey's Mixture.) Sig.: Two tablespoonfuls in 1/2 glass of water.

A large amount of the ferrous sulphate found in the stores is oxidized into a subsulphate, which when dissolved in water produces a rusty precipitate. The sulphuric acid dissolves the precipitate and prevents further oxidation into the subsalt. It also gives its tonic and refrigerating properties to the solution.

R.		
Ferri et potassii tartratis	8.000	5ii
Sodii phosphatis	45.000	5iiss
Acidi citrici	4.000	5i
Aquæ q. s. ad.	180.000	5vi

Misce et fiat solutio. Sig.: Dessertspoonful three times a day.

The citric acid prevents the precipitation of the ferric phosphate formed. The excess of sodium phosphate produces a laxative effect. The official ferri phosphas solubilis has a similar action to the above, except its laxative effect is not so marked.

II. It is often advisable to combine inorganic iron with other general tonics. By the term general tonic we refer to those drugs whose general invigorating effect exceeds any selective action. It is conceivable how in different conditions the same drug might be considered as a general tonic or as having a selective action, as example cinchona in malaria and malarial cachexia. It is probable that the "tonic effect" of any drug is due to some selective action, in which case the term "tonic drugs" is a misnomer.

The U. S. P. combines iron with other tonics in the following preparations: Elixir, Syrupus and Glyceritum Ferri, Quinina et Strychnina Phosphatum; Ferri et Quinina Citras; Ferri et Quinina Citras Solubilis; Vinum Ferri Amarum; Ferri et Strychnina Citras; Syrupus Hypophosphitum Compositus.

Examples of the combination of iron with other tonics are as follows:

R.		
Tincturæ ferri chloridi	12.000	5iii
Liquoris acidi arsenosi	4.000	5i
Tincturæ cardamomi	15.000	5iv
Glycerini	15.000	5iv
Aquæ q. s. ad.	90.000	5iii

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day after meals.

The tincture of ferric chlorid and the solution of arsenious acid both contain dilute hydrochloric acid. The glycerin prevents the formation of the subchlorid of iron.

R.		
Syrupi ferri iodidi	15.000	5iv
Syrupi hypophosphiti q. s. ad.	180.000	5vi

Misce et fiat solutio. Sig.: Dessertspoonful in water three times a day after meals.

Both of the above preparations contain dilute hypophosphorous acid.

R.

Ferri et strychninae citratis...	4.000	3i
Liquoris sodii arsenatis.....	4.000	3i
Tincturae cinchonae detannatae		
N. F.	30.000	3i
Syrupi	15.000	3iv
Aqua q. s. ad.....	90.000	3iii

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day after meals.

The solution of sodium arsenate or arsenious acid may be used in the above prescription, but not the solution of potassium arsenite, as the alkaline bicarbonate in the solution of potassium arsenite will precipitate the strychnin in the iron solution. The detannated tincture of cinchona, N. F., must be used as the U. S. P. tincture of cinchona contains tannic acid, which will form the insoluble tannate of iron.

R.

Massae ferri carbonatis.....	.200	gr. iii
Extracti nucis vomicae.....	.013	gr. 1/5
Hydrargyri chloridi corrosivi..	.0008	gr. 1/80
Arseni trioxidi .....	.0011	gr. 1/60
Extracti gentiana .....	.016	gr. 1/4

Misce et fiat pilula vel tabella No. 1. Mitte tales No. XX. Sig.: One pill or tablet three times a day after meals.

In dispensing preparations containing ferrous carbonate it is essential to mix them in such a way as to prevent oxidation. The official preparations containing ferrous carbonate are incorporated with sugar, syrup, glycerin and honey. When pills are ordered it is well if a number are prescribed to recommend coating. The various tablets containing ferrous carbonate are always coated.

The presence of organic drugs in connection with ferrous carbonate which we find in most preparations containing ferrous carbonate has but little, if any, tendency to convert the carbonate into an oxid.

The above precautions are very necessary because when ferrous carbonate is exposed to the air it undergoes oxidation, forming ferric subcarbonate, which is really a mixture of ferric subcarbonate and ferric oxid, having a hypothetical formula only, and which is almost incapable of reduction in the alimentary tract.

Whether a preparation of iron is soluble or not makes but little difference as to its efficiency. The important question is whether or not the preparation is capable of reduction in the alimentary tract.

Generally the ferrous salts of iron are rather difficult of solution. Especially is this true of the

carbonates, yet the ferrous salts are more efficient than the ferric salts. This may be explained by the fact that ferric salts of iron undergo reduction in the alimentary tract to ferrous salts with the liberation of free acid, producing in many instances too high a degree of irritation (see previous paper).

R.

Ferri reducti .....	.0650	gr. i
Strychninae sulphatis .....	.0011	gr. 1/60
Quinae hydrochloridi .....	.0650	gr. i
Phosphori .....	.0005	gr. 1/120

Misce et fiat tabella vel pilula No. 1. Dentur tales tabellae vel pilulae No. XXX. Sig.: One tablet or pill three times a day after meals.

III. It is often advisable to combine iron with bitter stomachics. Of the simple bitters (so called because they have only bitter stomachic properties) quassia, calumba and chirata are compatible with iron. Gentian contains gentisic acid, which forms with iron a green precipitate of iron gentianate, so that in prescribing gentian with iron a slight excess of iron should be used and directions given to filter. The preparations of the simple bitters may be prescribed with any of the preparations of iron.

Of the complex bitters (so called because they have other uses as distinctive as their bitter stomachic properties) nux vomica, taraxicum and hydrastis are compatible with iron, but cinchona, which contains tannin, is incompatible with inorganic iron salts unless the detannated tincture, N. F., be used. Berberis and serpentaria contain tannic acid and may not be prescribed with iron. As all the soluble inorganic iron salts and preparations of the same are neutral or acid in reaction, they may be prescribed with complex bitters without fear of precipitation of alkaloids. The weak organic acids found in the simple bitters, or used in making the official preparations of the same, do not interfere.

The following are examples of the combination of iron with bitter stomachics:

R.

Tincturae calumbae	24.000	3vi
Tincturae ferri chloridi.....	8.000	3ii
Glycerini	15.000	3iv
Elixiris simplicis q. s. ad....	90.000	3iii

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day before meals.

R.

Tincturae nucis vomicae	8.000	3ii
Syrupi ferri iodidi.....	24.000	3vi
Tincturae cardamomi compos-		
ita	45.000	3iss
Aqua q. s. ad.....	90.000	3iii

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day before meals.

R.		
Ferri citratis	8.000	3ii
Tincturæ hydrastis	24.000	3vi
Sodii bicarbonatis	15.000	3iv
Syrupi rhei aromatici.....	30.000	3i
Aquæ cinnamomi q. s. ad....	90.000	3iii

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day before or after meals.

The sodium bicarbonate is soluble in the aqueous solution and there is some possibility of a slight precipitation of the alkaloid, hydrastina, because of the alkalinity produced by the sodium bicarbonate and the potassium carbonate in aromatic syrup of rhubarb.

R.		
Tincturæ ferri chloridi.....	20.000	3v
Glycerini	15.000	3iv
Tincturæ gentianæ compositæ..	120.000	3iv

Misce et filtra. Sig.: Teaspoonful in water three times a day before or after meals.

The glycerin prevents reduction of the tincture of ferric chlorid to the subchlorid. The tannin in the compound tincture of gentian forms an insoluble iron gentianate, which is removed by filtration. The excess of iron still leaves enough iron in solution.

IV. In certain cachexias we often desire to combine iron with alterative drugs for their tonic alterative effect. Examples are as follows:

R.		
Tincturæ ferri chloridi.....	15.000	3iv
Hydrargyri chloridi corrosivi.	.130	gr. ii
Potassii iodidi	16.000	3iv
Glycerini	15.000	3iv
Aquæ q. s. ad.....	120.000	3iv

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day after meals.

There is formed potassio-mercuric iodid, which is soluble. The glycerin acts as a preservative and prevents any changing of ferric chlorid into the subchlorid.

R.		
Syrupi ferri iodidi.....	12.000	3iii
Tincturæ cinchonæ detannatæ		
N. F.	90.000	3iii
Elixiris simplicis q. s. ad....	180.000	3vi

Misce et fiat solutio. Sig.: Dessertspoonful in water every two or four hours.

The detannated tincture, N. F., must be used as the official tincture contains tannin, which will precipitate the iron.

R.		
Tincturæ ferri chloridi.....	8.000	3ii
Quininæ hydrochloridi	2.000	3ss
Acidi hydrochlorici q. s.....		
Elixiris simplicis q. s. ad....	180.000	3vi

Misce et fiat solutio. Sig.: Dessertspoonful in water every three or four hours.

The salts of the alkaloid quina are soluble in acid media and may be prescribed with acid solu-

ble iron. In prescribing the quinin salts in solution the amount of acid should be a little in excess of the amount of quinin salts used, being less in excess in the more soluble salts, as the bisulphate and hydrochlorid, and more in excess in the less soluble salts, as the sulphate. It is hardly necessary to say that the acid used should correspond to the salt. Most physicians prefer to write q. s. after the acid. In such cases the pharmacist adds the acid, drop by drop, until the quinin is dissolved.

The solid preparations of iron may be combined with solid preparations of the alterative drugs in tablets, pills or powders. Preparations of this kind are easily formulated by the physician, but are often more difficult to compound by the pharmacist, but few pharmacists are prepared to dispense tablets of their own making, and tablets are usually more efficient than pills.

This difficulty, however, does not apply to the compounding of powders, in those cases where the drugs may be so dispensed. Pharmaceutical houses have solved this problem by preparing tablets in accordance with standard formulæ from which the physician may choose according to indications. One *difficulty*, however, consists in the multiplicity of formulæ which leads to confusion, and one *danger* consists in adapting the patient to the tablet rather than the tablet to the patient.

V. In amenorrhea it is often desirable to combine iron with emmenagogue drugs. One of the best examples of such combinations is DeWeess' Emmenagogue Mixture as follows, the ingredients of which may be varied as necessary:

R.		
Tincturæ ferri chloridi.....	12.000	3iii
Tincturæ cantharidis	4.000	3i
Tincturæ aloes	15.000	3iv
Tincturæ guaiaci ammoniatæ.	45.000	3iss
Syrupi	180.000	3vi

Misce et fiat mistura. Sig.: Dessertspoonful in water three times a day.

The ammonia in the aromatic tincture throws out the iron as a ferric hydrate, and the water precipitates the resins which adhere to the sides of the container. The preparation makes an ugly-looking mixture of doubtful efficiency. Directions should be given to shake.

R.		
Ferri sulphatis	0.1300	gr. ii
Arseni trioxidi	0.0016	gr. 1/40
Mangani dioxidi præcipitati.	0.2000	gr. iii
Aloe purificatæ .....	.0650	gr. i

Misce et fiat pilula vel tabella No. 1. Mitte tales No. C. Sig.: One pill or tablet three times a day after meals.

R.		
Tincturæ ferri chloridi.....	15.000	5iv
Liquoris acidi arsenosi.....	4.700	gtt. lxxii
Hydrargyri chloridi corrosivi	0.065	gr. i
Acidi hydrochlorici diluti...	15.000	5iv
Tincturæ aloes et myrrhæ...	45.000	5iss
Syrupi zingiberis, q. s. ad...	180.000	5vi

Misce et fiat solutio. Sig.: One or two teaspoonfuls in water after meals three times a day.

VI. In heart conditions where a hematinic is indicated, it is sometimes desirable to combine iron with heart stimulants.

Liquid preparations of digitalis, strophanthus, convallaria, and nux vomica are acid in reaction and may be prescribed with acid soluble preparations of iron. Ammonium carbonate and aromatic spirits of ammonium are alkaline in reaction and may be prescribed with those scale salt preparations not acid or not containing alkaloids. Caffeina citrata, camphora monobromata; the crude drug and solid preparations of digitalis, strophanthus and nux vomica may be prescribed in powder, pill or tablet, with solid preparations of iron. Examples are as follows:

R.		
Ferri sulphatis	8.000	5ii
Ammonii carbonatis	12.000	5iii
Syrupi rhei aromatici.....	30.000	5i
Aquæ cinnamomi q. s. ad...	180.000	5vi

Misce et fiat solutio. Sig.: Teaspoonful every three or four hours.

R.		
Ferri et ammonii citratis...	6.000	5iss
Tincturæ digitalis	24.000	5vi
Tincturæ aloes	24.000	5vi
Glycerini	15.000	5iv
Elixiris simplicis q. s. ad...	120.000	5iv

Misce et fiat solutio. Sig.: Teaspoonful in water three times a day after meals.

The iron and ammonium citrate is insoluble in alcohol unless the per cent. of alcohol is below 40 per cent. Digitalis is not supposed to contain tannin, but does contain a trace of a substance that darkens with iron, but to such a small extent that it would not render the prescription incompatible.

R.		
Infusii digitalis	90.000	5iii
Liquoris ferri et ammonii acetatis q. s. ad.....	180.000	5vi

Misce et fiat solutio. Sig.: Tablespoonful in water three times a day.

Sometimes a precipitate of ferrous hydroxid, gradually becoming a reddish precipitate of ferric hydroxid, occurs. To prevent this or, if it occurs, to redissolve, add a little acetic acid.

R.		
Strychninæ sulphatis .....	.00065	gr. 1/100
Extracti digitalis .....	.013	gr. 1/5
Ferri reducti .....	.016	gr. 1/4
Extracti rhamni purshianæ..	.065	gr. i

Misce et fiat pilula vel tabella No. 1. Mitte tales No. C.

R.		
Extracti nucis vomicæ.....	.010	gr. 1/6
Hydrargyri chloridi corrosive.	.00065	gr. 1/100
Arseni trioxidi .....	.001	gr. 1/60
Ferri sulphatis .....	.130	gr. ii
Potassii carbonatis .....	.130	gr. ii

Misce et fiat pilula vel tabella No. 1. Mitte tales No. C.

R.		
Caffeina .....	.032	gr. 1/2
Digitalis .....	.065	gr. i
Tincturæ strophanthi.....	.032	gr. 1/2
Ferri reducti .....	.032	gr. 1/2
Aloes purificatæ .....	.065	gr. i

Misce et fiat pilula or tabella No. i. Mitte tales No. C.

VII. Often it is desirable to combine nerve sedatives or nerve tonic sedatives with preparations of inorganic iron. These combinations are most conveniently made in tablet or pill. However, it is often convenient to compound them in solution. Examples are as follows:

R.		
Lithii bromidi	16.000	5iv
Tincturæ cannabis indicæ...	6.000	5iss
Ferri citratis	6.000	5iss
Glycerini	15.000	5iv
Syrupi aurantii	45.000	5iss
Aquæ cinnamomi q. s. ad...	120.000	5iv

Misce et fiat solutio. Sig.: Teaspoonful doses.

Salts may be dispensed in alcoholic solutions where the alcohol is not too concentrated. When the solution is too strongly alcoholic, the dispenser invariably dissolves the salt in water and then mixes with the alcohol.

R.		
Fluidextracti sumbul.....	12.000	5iii
Ammonii valerianæ	6.000	5iss
Syrupi ferri iodidi.....	15.000	5iv
Elixiris simplicis q. s. ad...	90.000	5iii

Misce et fiat solutio.

R.		
Phosphori .....	.00065	gr. 1/100
Extracti nucis vomicæ.....	.0065	gr. 1/10
Asafetidæ .....	.0650	gr. 1
Extracti valerianæ .....	.0325	gm. 1/2
Extracti sumbul .....	.0325	gr. 1/2
Massæ ferri carbonatas.....	.1000	gr. 1½

Misce et fiat pilula vel tabella No. 1. Mitte tales No. XXX.

R.		
Extracti cannabis indicæ.....	.0065	gr. 1/10
Extracti sumbul .....	.0325	gr. 1/2
Extracti valerianæ .....	.0325	gr. 1/2
Extracti hyoscyami .....	.0325	gr. 1/2
Ferri reducti .....	.0650	gr. 1
Extracti rhamni purshianæ...	.0325	gr. 1/2

Misce et fiat pilula vel tabella No. 1. Mitte tales No. XXX.

R.		
Extracti sumbul .....	.065	gr. 1
Asafetidæ .....	.065	gr. 1
Extracti nucis vomicæ.....	.008	gr. 1/8
Ferri sulphatis exsiccati.....	.065	gr. 1
Extracti rhamni purshianæ...	.0325	gr. 1/2
Aloini016	gr. 1/4

Misce et fiat pilula vel tabella No. 1. Mitte tales No. XXX.

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EDITORIALS

**THE AMERICAN MEDICAL ASSOCIATION
AND ITS TRADUCERS.**

Most of our readers are familiar with the fact that since the American Medical Association has been active in exposing the fraud and deception connected with the proprietary and "patent medicine" business there have been many attacks upon the Association and its policies by those who were financially affected by the exposures. These attacks have had the one purpose of attempting to discredit the work of the Association and prevent further progress. In this fight against the Association the proprietary and "patent medicine" interests have been openly or secretly aided by many drug journals and a few so-called medical journals which owe their continued existence to the profits secured from nostrum advertising.

At first these attacks were on the Association and its policies, but, finding that little effect was produced, the attacks became personal and were directed against the officers of the Association, finally being centered on the secretary-editor, Dr. George H. Simmons. In the attack upon Dr. Simmons the foes of the Association have had the active and continued assistance of a member of the medical profession, who has not hesitated to put so much villification and personal abuse into his numerous articles and pamphlets as at once to stamp his attitude as one of maliciousness or a desire for personal revenge.

The fact that so much personal abuse has been indulged in by those who have attacked the Association and its officers in the numerous articles and pamphlets that have been distributed by the thousands has had the logical effect of showing to the majority of the members of the medical profession the animus of the attacks. But inasmuch as misrepresentation and wilful distortion of facts concerning the function, acts and policies of the Association have also had the effect of creating an impression among some members of the medical profession that perhaps the charges as made are true, *The Journal* of the American Medical Association, in its issue of March 5, has begun a series of articles for the purpose of showing its readers

what has been and is being accomplished in the interest of both the medical profession and the public by the American Medical Association. The reasons for the attack upon the Association and its officers, and some of the misrepresentations made by the traducers, are clearly pointed out in the first article, and it is hoped that in the future articles the whole subject will be discussed in such a manner that every unprejudiced member of the Association will understand that the attacks to which we have alluded are for the most part based upon motives of retaliation and a desire for personal revenge at any cost.

Men may differ in policies, and a discussion of the merits of any question is in order, but such discussion should be free from misrepresentation and malicious persecution of individuals. Every member of the A. M. A. should know that the representatives from the constituent bodies of the Association have a voice in the policies of the Association and that the officers or committees duly elected or appointed by such representatives are entrusted with the duty of carrying out the adopted policies. We believe that every right-thinking member of the Association can be positively shown that the management of the Association's affairs has been in good hands and that what has been accomplished for the benefit of the profession and public is marked by fidelity and honesty of purpose as well as an exhibition of ability and good judgment on the part of those who have done the active work. The secretary-editor, who acts as one of the representatives of the Association and performs the duties assigned him, has done his work in a manner creditable alike to him and to the Association, and no amount of personal abuse of him should be considered by the fair-minded in estimating the value of his services. That some of the policies of the Association may require alteration may be admitted, but if reforms are needed let those reforms be adopted after a fair and honorable discussion of the merits of the subject, and not accepted to satisfy the desires of a few who are fighting in retaliation or to satisfy personal ends.

We believe that the discussion of the pertinent facts in connection with the details of the American Medical Association and its management will show that the attacks now being made are founded upon unworthy motives, and we urge every physician who is interested in the progress of medical organization as it pertains to the advancement of the science of medicine or the business relations of physicians to read carefully the series of articles which it is announced will appear in the forthcoming issues of *The Journal* of the A. M. A.

It is perhaps safe to say that a large majority of medical men are unfamiliar with many of the results that have been accomplished by the Association, as they are also unfamiliar with the commendable work which has been done by the numerous officers and committees who have been responsible for the carrying out of the policies of the Association. It is, therefore, entirely appropriate that information upon this subject should be given in detail, and especially in view of the fact that a few of those who have been hurt by the policies of the Association, or have personal animosities to satisfy, have seen fit to attempt to discredit this great work and bring odium upon the Association.

MEDICAL RESEARCH IN DANGER.

Sufficiently extensive have the operations of the antivivisectionists in the United States become that the sense of safety inherent in the minds of the truly scientific world may be carrying us too far in ignoring these activities. At least such is the prevailing sentiment of the American Medical Association, and as a result there was created at the last meeting of that body a Council on Defense of Medical Research, whose function it shall be to provide and to cause to be distributed to the public the most reliable and authentic data obtainable on animal experimentation. So far there has been produced a series of six articles on the rôle of animal experimentation in relation to the problems of vaccination, tuberculosis, diagnosis of disease, cancer, the live-stock industry, and the ethics of animal experimentation. These articles are prepared in pamphlet form, ready for public distribution, and three of them have already appeared in *The Journal of the A. M. A.*¹

That there is needed a concerted action on the part of the medical profession against the antagonism of these pseudo-humanitarians, one needs only to recall, as is pointed out in a recent editorial in the *Journal of the A. M. A.*, the bitter fight that has been waged in Great Britain, the outcome of which has been the enactment of such rigid legislation that the British scientist must needs go to a foreign land to pursue his work in whatever medical research is based on animal experimentation, which is by far the greater and more important portion. And already, in this country, there are six antivivisection societies, one of which publishes a monthly journal, the others actively distributing literature to the public. Indeed, one of these societies has recently received a gift of ten thousand dollars with which

to carry on their war. The combat for the defense should not be left to the laboratory worker, a student who puts in his hours within the same four walls trying to fathom the problems that are baffling the science of medicine, but should be taken up and actively waged by the practicing physician and surgeon who go about among their people where the question is being discussed in a manner notoriously dark with ignorance of all the triumphs of medicine, all the blessings of humanity that owe their very existence to animal experimentation. To the medical man of average intelligence nowadays, the picture of medical practice stripped of all that has been born of animal experimentation, is absolutely revolting in its empiricism.

Rosenau speaks well when he quotes Charles W. Eliot as follows: "The humanity which would prevent human suffering is a deeper and truer humanity than the humanity which would save pain or death to animals." His article is an eloquent exposition of the rôle played by animal experimentation in the diagnosis of disease, a rôle which by its exactness has served to raise "medicine from a despised empiric art to an exact science, the leaders of which rank with the most distinguished men of any calling in the esteem and gratitude of mankind." Without the modern accuracy of diagnosis, sanitary progress would be brought to a standstill, prevention and suppression of such communicable diseases as tuberculosis, malaria, typhoid fever, plague, diphtheria, cholera, etc., would be impossible. In spite of all the refinements in diagnosis of tubercle infection that are to-day being elaborated, the court of last appeal yet rests upon the evidence to be gained only by animal inoculation. Many are the cases of pulmonary or genitourinary tuberculosis in which, on account of their scarcity, the tubercle bacilli cannot be demonstrated in the sputum or urine by the microscope, and yet animal inoculation will prove beyond peradventure the presence of the deadly germ. Is the value of an early diagnosis in these cases to be sacrificed to the whims of the narrow-sighted, would-be humanitarian who would avert the prick of the hypodermic needle and the painless course of a guinea-pig tuberculosis? From a purely economic standpoint, where lies the indication—to save the life of a guinea-pig, or by virtue of an early diagnosis to preserve intact a family of several small children the family head of whom has been attacked by a disabling malady at the time so obscure as to demand absolutely for its solution the possible sacrifice of one guinea-pig? And especially when in the temporary obscurity of the diagnosis lies the only

1. *Jour. A. M. A.*, Jan. 1, 8 and 15, 1910.

salvation of a cure? If there be one of this band of shallow-pated faddists so heartless as thus to rob such a family of its only means of support, may the curse of the white plague be on him and his loved ones! The virtue of patience ceases to obtain in the presence of such narrow-mindedness.

Again, rob the world of what Koch, Trudeau and others have done through animal experimentation in the elaboration of a rational therapy for tuberculosis and you have deprived millions of the happiness that could have been theirs had their friends and relatives had access in the early stage of their disease to the nearest approach to a specific for tuberculosis as yet discovered, viz., tuberculin. Who knows as well as Trudeau when he says that "everything that has a direct bearing on the prevention of tuberculosis, everything that has changed mankind's attitude toward it from one of apathy and hopelessness when the infectious agent which produces tuberculosis was unknown, and the disease was thought to be inherited and always fatal, to the growing hope of its ultimate conquest—we owe to animal experimentation!" No fiercer arraignment of the inhumanity and selfishness of this cult could be mustered than that from the pen of this noble-spirited, patient slave there in his mountain retreat giving his whole life to the task of bringing more light into the vast field of gloomy darkness created by the tubercle bacillus. Thus he puts the proposition: "Those who cry out against animal experimentation trust us with the lives of their families when sick, but fear to trust us with rabbits and guinea-pigs. Surely, the motives of physicians who are trying to learn how to prevent and cure disease, when their livelihood depends on the practice of medicine, can hardly be called into question. Those who in their blind ignorance or through false sentiment are trying by legislative interference to stop or to restrict animal experimentation do not, as we doctors do, have to witness daily the ravages of this terrible disease and live in the midst of the suffering and sorrow which follow in its wake; they seem to be content that all this should continue indefinitely so long as they are not brought into contact with it. The new knowledge of tuberculosis, of such overwhelming importance to the human race, a knowledge which already gives assurance that generations to come will not die of this disease to the extent that former generations have died, has been won in recent years by animal experimentation. For all this is the death of any number of guinea-pigs and rabbits too high a price to pay? Are we to stop on the threshold of this newly acquired knowledge, and are the fruits of ultimate victory

to be denied to humanity? These would seem questions that could safely be left to the common sense of unprejudiced men."

All that we know of that other scourge to humanity, whose ravages harass our ranks of wives and mothers, and which attacks middle life with the stealth of the leopard, viz., cancer, we likewise owe to animal experimentation. As yet the riddle is unsolved, but with paths unimpeded, it is fair to presume that the solution is but a matter of time.

May no lethargic spirit of security creep over us to obstruct the way as gloriously blazed by our predecessors, but let each one do his part to spread true light on this vital subject.

ETHER THE ANESTHETIC OF CHOICE IN OBSTETRICS.

Although the superiority of ether over chloroform in routine operative surgery has now become pretty thoroughly established, both because of its decreased mortality and because of its lesser post-operative disturbance to the patient, yet there remain those who continue the use of chloroform as the anesthetic of choice in their obstetric practice. Those who do cling to chloroform in labor, and it is probable that they constitute the majority of the profession, probably do so for the same reason that Simpson, its discoverer, did, viz.: because he thought that it was "more speedy and perfect in its action, more agreeable in flavor, less irritating in its administration, and more transient in its effect." Recent observations have proven beyond peradventure that the last-named attribute is fallacious, for not only are the constitutional untoward effects of chloroform more severe, but are also more prolonged than those of ether.

As is well emphasized by Stowe in the February number of *Surgery, Gynecology and Obstetrics*, the factor of safety to the life of the patient should hold in obstetrics just as in surgery, for every delivery, normal or otherwise, is a surgical procedure and involves the questions of asepsis and anesthesia to the same if not greater degree of rigid caution.

A study of the effect of the two drugs upon the uterine contractions reveals some interesting facts. Under chloroform narcosis the uterine contractions become very weak and the intervals long, while under ether the intrauterine pressure is not so greatly decreased and consequently the interval between contractions is not so prolonged. Consciousness is regained more quickly from chloroform, and hence more of the drug has to be administered to prolong the narcosis than under

the slower recovery from ether, during which time a lacerated perineum or cervix may be repaired without the necessity of more anesthetic. The well-recognized danger of post-partum hemorrhage after chloroform is explained by its paralyzing effect upon the uterine ganglia and musculature, resulting in uterine atony.

One of the most interesting points brought out by Stowe is the close relationship between pathologic changes occurring in the liver insufficiency found in pregnancy, associated with pernicious vomiting, eclampsia, or acute yellow atrophy of the liver, and those following death from chloroform poisoning so well described by Bevan and Favill, Wells and others. While a similar calamity does occasionally follow the administration of ether, yet it is by no means so common as with chloroform. It would seem almost like following in the footsteps of the disciples of the *similia similibus curantur* doctrine to administer chloroform to an eclamptic woman, and Stowe goes so far as to say that "it may be possible that the free use of chloroform in eclampsia determines a fatal termination in those cases where the patient suffers from convulsions after delivery, or where the coma deepens and is accompanied by a steady decrease in the excretion of urine. From our present light, at least," he says, "the pathologic effects of chloroform narcosis add to the lesions produced by the eclamptic condition. If this theory is true, the choice of an anesthetic in the borderline cases will determine the ultimate outcome of the disease."

Anesthesia should not be induced during the first stage of labor, because of its tendency to prolong the stage of dilatation and to increase the chances of fetal asphyxiation, as well as favoring the opportunity for poisonous effects to the mother by prolonging the time of administration and increasing the amount of the anesthetic given. Ether works beautifully in the second stage when just enough can be given to produce analgesia until the head appears, whereupon the anesthetic is pushed to the point of sufficient relaxation to permit of delivery with the minimum risk of laceration.

Experience has proven that the most satisfactory way to give ether, both as regards the comfort of the patient and the ease of administration, is by the drop method on the open Esmarch inhaler. This holds true for obstetrical work as well as for surgical, and has been found to have produced less serious after-effects than any other form of administration; in fact, Kelly and Cullen have recently declared that they have been surprised at the remarkable decrease in post-opera-

tive vomiting since discarding the cone and adopting the open method.

The practice of obstetricians allowing the patient to administer her own anesthetic should be condemned. It goes without saying that once a woman is in the analgesic stage of anesthesia it is impossible for her further to cooperate with the obstetrician and produce relaxation at the time when it is absolutely indicated, namely, in the latter part of the second stage of labor, the time when perineal lacerations are produced. Unfortunately this complication is all too common, and the conscientious obstetrician owes it both to his patient and himself to do all in his power to avoid tearing a woman in delivery, and certainly it would seem that the least he could do would be to secure the services of an anesthetist whose cooperation would be his at any and all times.

It is a well-recognized fact that anesthesia in labor is far less often followed by nausea and vomiting than in ordinary operative work, and yet we are anxious to avoid any such complication if possible. As above remarked, the nausea and vomiting following the administration of ether is in the majority of cases less severe and of shorter duration than that of chloroform. The very common practice of washing out the stomach while the patient is still unconscious is effectual, particularly in cases in which much mucus has been swallowed during administration of the ether. And this untoward event can be largely obviated if the anesthetist will keep the head turned in such a way that the secretion may be drained and wiped away.

It is perfectly obvious to the merest tyro that the danger of pulmonary complications will be minimized by protecting the patient from both cold and undue exposure.

So that with the mortality and morbidity records so greatly in favor of ether, and with the much commoner sequence of the liver changes of eclampsia following chloroform, there seems little excuse to subject our maternity cases to the increased risk of life and health and ourselves to just censure by the exhibition of chloroform in preference to ether as the anesthetic in labor.

EDITORIAL NOTES

OUR medical historian, Dr. G. W. H. Kemper, of Muncie, complains because a Boston surgeon incorrectly calls Dr. Bobbs, of Indiana, Dr. "Dobs." Usually they are rather accurate in Boston, or think they are, and we are surprised that our Hoosier surgeon, Dr. Bobbs, who had the distinction of being the first operator in the world

to perform successfully a gall-bladder operation, should be so little known in Boston as to have his name twisted out of resemblance. But, then, it may be a typographical error, and it is quite the proper thing to blame such mistakes upon the printer.

AT a recent meeting of the State Board of Medical Registration and Examination, the board increased the medical college entrance requirements to one year of collegiate work, beginning Jan. 1, 1910, and two years of collegiate work, beginning Jan. 1, 1911. This action of the board is very commendable, and is in line with the efforts of the medical profession to raise the standard of medical requirements in the state of Indiana. The recent action of the board will meet with the general approval of medical men, and particularly the endorsement of educators who have long seen the need of such action.

QUITE recently a newspaper in one of the cities in Indiana described in a technical manner and in detail an operation performed upon a woman for the removal of a facial blemish. The name of the operator, together with some eulogistic praise for his skill, was also published. To add to the discomfiture of the operator the same issue of the paper which contained the news concerning the operation also contained news of the patient's death, and, as if to heap coals of fire on the poor doctor's head, the news item bore the headline, "Operation Killed Her." Evidently the doctor sought advertising and received more than he desired.

GOVERNOR MARSHALL may have considered it a joke on the doctors to say that a fifty-cent bottle of patent medicine cured him of a long-standing rheumatism, but the joke will not be so pleasant for the Governor if the patent medicine manufacturers flood the country with his pictures and publish in connection therewith his testimonial concerning the virtues of patent medicines. It may be suggested that as an effective piece of advertising the Governor should be represented before and after taking. In the one instance he could be represented as going into the capitol building at Indianapolis on crutches, and in the other instance he could be represented as kicking the crutches over the capitol dome. We almost envy the patent medicine firm for the success, financial and otherwise, which such a fetching bit of advertising would bring.

THE Indiana University School of Medicine has put its seal of disapproval upon the division of fees or the paying of commissions for patients referred by passing the following resolution:

"Resolved, That any member of the faculty or teaching staff of the Indiana University School of Medicine who shall be shown to be guilty, either directly or indirectly, of fee splitting, making an offer to split a fee, paying a commission for patients referred, or any violation of Article 6, Section 4, of the Principles of Medical Ethics of the A. M. A., shall be considered as having so impaired his usefulness as a member of the faculty or teaching staff of the School of Medicine by such unethical example to students, as to make his further connection with the faculty undesirable."

We wish to commend the Indiana University School of Medicine for taking this emphatic stand in the matter of the reprehensible practice of division of fees, in whatever form it is carried on. The practice, however disguised, is dishonest in principle, and no reputable and conscientious physician can afford to engage in it for a moment.

THE *Farmer's Guide*, published at Huntington, Ind., has recently published an editorial in which attention is called to the fake advertising carried by so many newspapers and periodicals which go to the home. Of particular interest is that part of the editorial which mentions the advertising of the quack doctor and disreputable specialist or medical faker who preys upon the supposed symptoms of weak people and frightens them into paying fees for special treatment, and the exploitation of patent nostrums which do considerable harm and no good. The readers are advised to refuse to bring into the home such newspapers or periodicals as carry advertising of such well-known fakers as the proprietary medicine house, and the medical specialist.

When a paper which circulates among farmers, who have been the best class of victims for the medical faker, takes such a stand as outlined in the editorial mentioned, it is a good sign, and one that may mean the ultimate development of a little conscience on the part of proprietors of our daily and weekly papers. It is quite true that the advertising of the medical faker has been driven out of many high class periodicals, and not a few daily papers, but there still remains a large army of newspaper proprietors who place the dollar above conscience and are willing to take the advertising copy of these medical swindlers who derive profit from imposing upon the sick and suffering, and usually the poorer classes who can ill afford

the drain. Newspaper editors who loudly proclaim their adherence to all of the virtues and are ever ready to criticize individuals for the slightest deviation from the path of rectitude, are quite willing to lend their advertising pages to the worst swindles that it is possible to devise. If the money derived from this quack medical advertising was obtained from the well to do, or even those who are physically or mentally sound, the crime would not be so conspicuous, but for the most part the medical faker numbers his patrons among the poor, the ignorant and the mentally and physically unsound. To take the money is bad enough, but oftentimes the swindler takes away the only possible chance the sufferer might have of securing relief by proper attention from one competent to give such attention.

To our mind there is no punishment quite severe enough for the medical mountebank, and all other swindling games pale into insignificance when compared with the game of the medical faker.

IF PREVIOUS records are equalled there will be between ten and fifteen thousand cases of pneumonia in Indiana during the winter and spring months, with the greater number occurring during March and April. One person out of four that has the disease in a severe form dies in a few days. The people are so used to its prevalence during the winter months that no thought is given to it. If yellow fever or cholera was as prevalent there would be widespread alarm and heroic efforts would be made to stamp out the disease. Yet pneumonia shows a large death-rate which can be materially reduced if people will give some attention to preventive measures. Incidentally the care exercised in preventing pneumonia will also reduce the morbidity and mortality from other diseases which, like pneumonia, are made possible through a lowered resistance.

The view has been held by the medical profession and the public for generations that a chill or exposure to cold, or a lowering of the physical tone, are the immediate exciting causes which give the germs of pneumonia an opportunity to become active. Anything that decreases vitality, notably overwork, be it physical or mental, too little food, or too much food, insufficient clothing, alcoholic drinks, or dissipation of any kind, in short, anything that has an ill effect on the general health, is an invitation to an attack of pneumonia. The family that has facilities for plenty of heat and insists upon a temperature of eighty to eighty-five degrees and will not permit the least ventilation for fear of draughts, and that is made up of good feeders, is a good family for one or more cases of pneumonia during the winter

months. People of this class are not usually open to conviction, and if the family physician insists too strenuously upon more ventilation it sometimes happens that there is a change of doctors.

But it is the duty of physicians to preach the gospel of fresh air and proper habits. People should be taught to regulate the temperature of their houses and to secure suitable ventilation. The temperature of the home should be about seventy to seventy-two degrees and there should be sufficient ventilation by windows, doors or other means to insure reasonably pure air all the time. No more prolific cause of sore throat, colds and pneumonia can be found than the hot vitiated air of some houses, public buildings, and places of business.

Over-dressing of the body with heavy woolen underclothing is almost as bad as an insufficient amount of clothing. Perhaps it is worse, for the reason that if the body is kept too warm the skin becomes moist, and in going out into the air the evaporation of the moisture causes a sudden chill. For this reason the chamois skin or other heavy chest protectors are not a preventive, but a cause of catarrhal inflammations of the upper respiratory tract. The practice of some women who do not remove heavy seal jackets and cloaks while in church or other warm buildings from which they are to go into the cold air, is a fruitful source of bronchial affections.

The drinking man is a ready prey to pneumonia. A system weakened by alcoholic indulgence cannot withstand the ravages of an attack of pneumonia, and a prolonged spree in the winter, with its usual exposure, is a suicide for a large number of the fatal cases of pneumonia.

The pneumococcus is present in the majority of healthy throats, and all that is necessary for its development and the consequent symptoms known as pneumonia is a lowered vital resistance from exposure and bad hygiene. Aside from ventilation and the avoidance of those things which lower the resisting power of the individual, care should be observed in the breathing of the dust-laden atmosphere. Housewives can do much in the prevention of the latter by opening the doors and windows when cleaning the house, thus permitting the dust to blow out, and in insisting upon having all rugs, carpets, draperies and clothing cleaned out of doors.

As an ounce of prevention is worth a pound of cure, attention to these precautionary measures is the only way in which the increase in the prevalence of pneumonia can be checked, and to the medical profession falls the duty of acquainting the public with the value of these preventive measures.

CORRESPONDENCE

CONCERNING DR. BOBBS OF INDIANA.

MUNCIE, IND., Feb. 26, 1910.

To the Editor:—In the *Journal of the American Medical Association* of Feb. 19, 1910, Dr. Henry O. Marcy, one of the leading surgeons of Boston, in a very interesting article on "The Early History of Abdominal Surgery in America," says, on page 605. "and most know that Dr. Dobs, of Indiana, was the first surgeon in the world to operate successfully on the gall-bladder."

We here in Indiana cannot stand everything. It is bad enough to have Dr. Bobbs called "Dobs," but it rubs it in when a Boston surgeon does it. If they keep on they will get down to "Dubs," and finally to "Dub."

Sincerely yours, G. W. H. KEMPER.

DEATHS

CHARLES W. FALL, M.D., of Fowler, Ind., died at his home, February 24, at the age of 50 years.

O'CONNELL FAIRHURST, M.D. Bellevue Hospital Medical College, 1870; died at his home in Vincennes, January 24, from heart disease.

AUGUSTUS A. FAHNESTOCK, M.D. Hahnemann Medical College, Chicago, 1865; died at the home of his brother in Marion, Ind., February 7, from the effects of a fall down a stairway, aged 76.

J. A. BERGSTROM, M.D., professor of education at Stanford University, California, died February 28, at Palo Alto. Previous to going to Stanford, he held the chair of physiology at the Indiana University.

J. B. ALLEN, M.D., a former president of the Wayne County Medical Society, and a prominent physician of the county, died at his home in Cambridge City, February 21, after a long illness from tuberculosis. A widow and one son, Harry Allen, of Indianapolis, survive him.

NEWS, NOTES AND COMMENTS

DR. JOHN N. RECORDS has been appointed postmaster of Franklin.

DR. ERNEST R. SISSON, Greenfield, who has been seriously ill in Indianapolis, is reported to be convalescent.

DR. EUGENE BUEHLER, formerly city sanitarian of Indianapolis, has recently opened an office in the Indiana Pythian Building.

DR. MAX C. HAWLEY, of Logansport, and Mrs. Josephine Quinn Vawter, of North Madison, were united in marriage, January 10.

DR. W. A. THOMPSON was appointed health commissioner of Liberty, Union county, at the last meeting of the town trustees.

THE Dugan-Johnson Company, one of THE JOURNAL's advertisers, has recently moved from 16 W. Market street to 206 N. Meridian street. Indianapolis.

DR. PAUL F. ROBINSON, of Indianapolis, was appointed by the New York Central Lines as surgeon of the Lake Erie & Western, taking effect Jan. 1, 1910.

DR. GEORGE F. KUNE, an interne at the Indianapolis Dispensary, has resigned and opened an office at 950 S. Meridian street. Dr. Kune's former home was in Aurora, Ind.

DR. J. M. HARROD, aged 60, a dentist of Scottsburg, died at his home February 24 from heart disease. He was a veteran of the Civil War, having served as regimental bugler.

A SITE has been selected about ten miles southwest of Delphi on a high bluff overlooking the southfork of Wildcat creek, for the location of the Lafayette Tuberculosis Sanatorium.

DR. CHARLES L. THOMAS, Logansport, who has been seriously ill in St. Luke's Hospital, Chicago, as the result of an automobile accident, has returned to his home greatly improved.

DR. CLAUDE H. WHITE, formerly of Danville, Ind., has recently purchased the residence and location of Dr. W. F. Horton at Monrovia, Ind., and will take possession in the near future.

SINCE the closing of the Eleanor Hospital for children in Indianapolis, the city hospital has been so crowded that an appropriation of \$100,000 has been asked to erect a children's hospital for the city.

DR. H. E. GABE has recently been elected president and A. B. Graham, secretary, of the judicial council of the Indianapolis Medical Society. The other members are Drs. C. F. Neu, E. deW. Wales and F. R. Charlton.

DR. GEORGE B. LAKE, of Wolcottville, delivered four lectures at Lafayette February 18, three to the students of Purdue University, and one before the Anti-Tuberculosis Society of that place, on the subject of Tuberculosis.

At the annual meeting of the Deaconess Hospital, the president of the Deaconess Association made a report, showing that the institution is in a highly prosperous condition. It is under the management of Henry Russe.

THE Seventh District Medical Society met with the Indianapolis Medical Society, February 22. After symposia in the afternoon and evening, a delightful buffet luncheon was served, the members of the two societies becoming much better acquainted.

DR. M. V. HUNT, of Anderson, after an illness of several weeks, has recently been sent to the Methodist Hospital, Indianapolis, for an indefinite stay. Dr. Hunt has suffered from asthma until his heart is affected, and absolute quiet has been recommended by his physicians.

At the February meeting of the Union County Medical Society, the members voted to entertain the Sixth Councilor District Medical Society, November 30. A committee of arrangements was appointed, consisting of Drs. Pigman, Egolf and Thompson. A banquet was provided for.

CONTAGIOUS diseases, especially measles, are causing Dr. J. L. Freeland, superintendent of the Indianapolis City Hospital, a good deal of worry. Additional buildings have been rented, and the city council has been asked for an appropriation to build a hospital for contagious diseases.

DR. WILLIAM T. EASTES, a well-known physician and surgeon of Gaston, was arrested on the charge of performing a criminal operation, February 21. Several years ago he was arrested on a charge similar to the one he now faces, but after the case was tried before three juries he was acquitted.

A COMMITTEE, consisting of the president and secretary of the Indianapolis Medical Society, has appointed the following staff for the Colored Orphans' Home: Medicine, Drs. A. R. Keller, J. D. Garrett, A. Henry and E. F. Kiser. Throat, Drs. Paul B. Coble, F. V. Overman. Eye and ear, Drs. W. F. Hughes and W. N. Sharp.

THE Indiana section of the American Chemical Society gave a banquet at the Columbia Club, Indianapolis, February 18. Addresses were made by Prof. W. F. Stone, of Purdue University; Dr. J. N. Hurty; C. S. Woods, city sanitarian; Prof. R. B. Moore, of Butler College, and president of the section, and Louis Schulmeyer of the Daniel Stewart Drug Company.

THE bacteriological department of the State Laboratory of Hygiene has received specimens of meat from slaughter houses and meat shops in Vincennes, Albion and Huntington, in which tubercle bacilli were found. The county health officers are making arrangements to make a thorough inspection of every slaughter house and butcher shop in the state.

JUDGE COLLINS, judge of the Police Court, was the guest of honor as well as the chief speaker at

the February meeting of the Younger Physicians' Club of Indianapolis. His address was on "The Probation Methods in Police Court." He has made a special study of probation methods and believes in sending drunkards to an "Inebriety Farm" to be cured rather than to jail.

DR. G. W. H. KEMPER, of Muncie, delivered an address on Abraham Lincoln by special invitation, at the annual banquet of the Loyal Legion of Indiana, an affair given each year on the birthday anniversary of Abraham Lincoln, at Indianapolis. Dr. Kemper also gave the address at the High Street M. E. Church at the request of the pastor, Rev. Clark Crawford, the day following the banquet in Indianapolis.

DR. WM. F. KING, of Columbia City, Ind., has been appointed assistant to Dr. J. N. Hurty, Secretary of the State Board of Health. Dr. King has been Secretary of the Whitley County Board of Health, and his new duties will consist chiefly in visiting the school buildings, making inspections of school buildings and premises, taking throat cultures where epidemics are suspected or threatened, and attending meetings and making addresses to teachers, school boards and trustees.

ON the suggestion of Dr. William N. Wishard, Indianapolis, it is probable that another method than the competitive examination will be adopted for the selection of interns for the Indianapolis City Dispensary and City Hospital. As there is but one medical school, the ordinance providing for competitive examination is not considered necessary, as the grade made in the final college examination or before the State Board of Medical Registration and Examination may properly be taken as a basis.

ACCORDING to an advance program, the program of the Shelby County Medical Society, which met February 16, consisted of a symposium on cardiovascular-nephritic disease. Dr. Myers, Professor of Anatomy of Indiana University, exhibited a number of specimens. Dr. Ritter of Indianapolis, brought a collection of pathological specimens and did several practical urinalyses. Dr. Kimberlin discussed the practical medical phase of the subject. At 5:30 a cardiovascular-nephritic clinic was held. A banquet was held in the evening.

SINCE the publication of our February number the following have been approved by the Council on Pharmacy and Chemistry of the American Medical Association:

Accepted for N. N. R.:

Filmaron (Merek & Co.).

Filmaron Oil (Merek & Co.).

Thiol Liquid (Riedel & Co.).

Thiol Powder (Riedel & Co.).

Accepted for N. N. R. Appendix:

Maltine with Cod-Liver Oil (Maltine Co.).

Maltine with Caseara Sagrada (Maltine Co.).

Maltine with Cresote (Maltine Co.).

Maltine Ferrated (Maltine Co.).

Maltine Hypophosphites (Maltine Co.).

Maltine with Wine of Pepsin (Maltine Co.).

Maltine Yerbine (Maltine Co.).

Maltine with Olive Oil and Hypophosphites (Maltine Co.).

Maltine with Phosphate of Iron, Quinia and Strychnia (Maltine Co.).

SOCIETY PROCEEDINGS

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of Jan. 18, 1910.)

Society met in regular session in the assembly room, with seventeen members present.

Clinical cases. Dr. Albert E. Bulson, Jr., reported a case of a woman who consulted him two weeks previous with an injury to the right eye. Vision in left eye lost in childhood. While stooping over in the dark the woman struck the right eye on the back of a chair, and immediately it was impossible for her to see. Family physician called and referred case to Dr. Bulson, who found the anterior chamber full of blood. Eyeball was found to be ruptured, and the vitreous and iris had been crowded out under the conjunctiva. Put case in hospital and ordered icebags applied to the eye. When the hemorrhage disappeared it was seen that there was a tear in the sclera close to the cornea over a half-inch in length, without the slightest tear in the conjunctiva. The only thing that prevented the emptying out of the globe was that the conjunctiva remained intact. The outcome is yet problematical, for what we have to contend with now is the tendency to degeneration of the vitreous and detachment of the retina.

Discussion by Drs. Havice and Weaver.

Regular program. Presentation of cases for diagnosis, and report of cases. Dr. W. W. Carey reported a case of mycosis fungoides. Patient male, aged 71, single, Canadian. Family history, father died at age of 70 of kidney trouble; mother died at age of 73 of senility; one brother died suddenly at age of 55; one of senility at age of 80 (half brother); one half brother at age of 56 of tuberculosis, and one sister at 65 of heart trouble; one brother, living, in good health. Patient had all the diseases of childhood, but no serious illness in all his life. Slight attacks of rheumatism. Present trouble commenced four years ago, patient first noticing numbness of right arm. Sensation seemed to commence at the spine and extended down to hand, accompanied by severe pain. Pain aggravated upon use. Gradual recovery after attack,

but fingers still a little stiff and clumsy. General health good during this time. A year ago last September noticed lump or nodule on left side of arm and three such nodules on right side. Those on right side cleared up after treatment without breaking down, but the one on left side broke down, was large at first, but also improved under treatment. Two lumps appeared six to eight weeks ago on left arm, and ulcerating tissue much increased. Odor foul and discharge free. No history of syphilis; no enlarged glands in elbow or neck; axillary glands not involved. Patient anemic, tires easily on exertion; nervous and worried about condition. Bowels regular; urine not tested. Microscopical examination shows mycosis fungoides.

Discussion by Drs. Weaver, Morgan, Rhamy, Barnett and Havice.

Dr. Hamilton reported following case: Child, aged 2½ years, has passed and vomited thread worms during past year. A week ago child woke up in marked pain. An enema was given with little result, a small amount of gas being obtained. Abdominal examination revealed but little. Pulse 120, temperature 101-102. Examination per rectum revealed protrusion, and diagnosis of obstruction made. Operation disclosed an abscess which was peri-appendiceal, plastered up against knuckle of ileum, within one inch of ileocecal valve. There was an ulceration on the ileum the size of a half dollar. Resection not being well borne in children, Dr. Hamilton decided to trust that fecal fistula would form. Patient put in Fowler's position and Murphy treatment instituted. So far no indication of fecal fistula. Child seems to be doing well.

It is possible there was a worm in the appendix which started the trouble and had gotten out. It is the ulcerated condition of the ileum next the ileocecal valve and the youth of patient that lend interest to case.

Discussion by Drs. Havice, Morgan, Weaver and closed by Dr. Hamilton.

Dr. Havice reported case of boy, 6 years of age, who had ear trouble following scarlet fever. Nine weeks after onset of ear complication was brought to Dr. Havice. He was extremely septic, and had marked double mastoid infection; was deaf and paralyzed in right side of face. Dr. Havice opened swelling behind left ear, and at end of four days did double mastoid operation, and cleaned out all necrotic bone. Case getting along nicely now. Condition should have been recognized earlier, as this boy is deaf, and it is very questionable if he will ever regain his hearing. Should be put in institution so that he will not forget how to talk.

Discussion by Drs. Bulson, Beall and Carey. Drs. Wilking, Weaver and Morgan also discussed cases.

Name of Dr. Culp was again placed on roll after he had returned his withdrawal card.

Adjourned. J. C. WALLACE, Sec.

(Meeting of Feb. 1, 1910.)

Society met in regular session, with twenty-two members present. Clinical cases. Dr. Albert E. Bulson, Jr., reported case of operation on immature nuclear cataract. Text-books, as a rule, advise not to operate. Patient, a woman, had had failing vision for three or four years, and was operated early by Dr. Bulson because she was becoming very much disturbed in mind as result of failing vision. On operation considerable soft cortical material was found, and by irrigation and trituration much of this was removed. Iris

was kept well dilated. Under application of dionin some of the cortical material was absorbed. Four weeks after the cataract extraction a discission was done, and the results are excellent. With correcting lenses patient has 20/15 vision and reads Jaeger No. 1. The psychical effect of the operation has also been exceedingly beneficial.

Dr. Havice reported case. Pain in left eye; marked hypopion; no history of injury. One eye suddenly pained him, with no relief from cold applications followed by heat. Pus was found in the inner side of eye; opened and drained. The eye is lost. Questioned best plan of treatment. Dr. Havice thinks this infection came by way of ethmoid cells.

Dr. L. P. Drayer read a paper on "Tetanus," in which he gave an epitome of the literature on the subject. In conclusion he said that the injection of tetanus antitoxin for preventive purposes is beyond doubt the proper thing to do. The longer the period of incubation the more susceptible the disease to the treatment. The intraspinal injection is the best as it gets there quickest.

Discussion by Drs. Rosenthal, Havice, Porter, Bulson, Morgan, B. Van Sweringen, Weaver, English, Beall, C. E. Barnett, and closed by Dr. Drayer.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Feb. 8, 1910.)

Society met in regular session in the assembly room. In the absence of Secretary Wallace, Dr. Chas. R. Dancer was appointed secretary pro tem.

Dr. E. J. McOscar reported having seen five cases of Colles' fracture during the last icy season. Believes it impossible to reduce same without anesthetic. Thinks lack of anesthetics predisposes to malpractice suits, and the profession should refuse to treat such a case without anesthetic. Not necessary in mere dislocation at wrist.

Dr. Alfred Kane reported a case of secondary anemia. Patient, widow, aged 42, American. Good health until after 16 years of age, when she became pale. Pallor lasted several years. Ulcers appeared on anterior leg which were sixty days in healing. Sputum examination negative; blood examination: reds, 1,678,000; hemoglobin, 15 per cent.; whites, 8,700; polynuclears, 61.4 per cent.; large lymphocytes, 10.8; small lymphocytes, 17.8; transitionals, 6.4; eosinophils, 2.6; nucleated reds, 1. Put on iron and arsenic, and hemoglobin came up to 70 per cent.; cells normal. Is now symptomatically well; recent hemoglobin estimation, 90 per cent.

Dr. Rawles, referring to liquid Bland's producing nausea, said it should be well corked and well diluted with wine or water. Glycerin will take up water from the air and iron will dialyze.

Dr. Porter referred to case for operation for appendicitis. Turned case over to Dr. McCaskey, who found intestinal infection and pernicious anemia. Finally autopsy revealed carcinoma of pancreas. Believes Dr. McCaskey's original diagnosis of intestinal infection acting as causative factor in causing carcinoma eventually.

Drs. McOscar and Drayer both discussed forms of iron to be given.

Dr. C. F. Kaadt exhibited patient, woman, who had been sick for six years. Operation for appendicitis and prolapse of kidney. History negative except vomiting at one time for twelve weeks. Had periodical tympanitis with temperature. Tuberculin test negative; urin-

alysis negative. Patient never free from pain. Temperature $100\frac{1}{2}$; was $101\frac{1}{2}$ the day before; bowels irregular; no escape of gas. Sister died of tuberculosis at 27. Menstrual flow ceased after nephropexy. History of syncope with rigidity. Examination shows tenderness over left lower abdomen. Weight, 97 pounds.

Opening discussion. Dr. Porter said facts not sufficient to discuss in full. Believes her hypersensitive, may be hysterical, with some physical disorder, likely tubercular. Would not make diagnosis with present data, but would think first of tuberculosis.

Dr. McOscar said he had seen the case often. Has had several attacks, and appendix removed, though not badly diseased. At this time kidney movable; months after it was anchored. Had intense pain with great distension of abdomen. Gave little anesthetic and distention disappeared.

Dr. Rosenthal said this case shows how a nervous temperament overshadows any apparent physical ailment; reflexes exaggerated; hypersensitiveness real and imaginary is only conjectural; wound six years old shows a vulnerability. Referred to case under his observation following abdominal operation. Had large funnel shaped ulcer at site of incision in right iliac fossa. Gave history of various treatments, wound curetted and incised, etc., with beginning healing and then going to the bad. Microscopic examination revealed granuloma. Gave K. I. and mercury with immediate good results. Question as to when she contracted syphilis. Believes wound in this case may be due to present tuberculosis.

Dr. Drayer saw this case $1\frac{1}{2}$ years ago, and did not then respond to tuberculin test. Believes true neurasthenia is more rare than Raynaud's disease, and very difficult to diagnose. Would suggest open treatment and lack of sympathy in this case.

Also discussed by Drs. Kane and C. E. Barnett.

Adjourned. C. R. DANCER, Sec. Pro Tem.

(Meeting of Feb. 15, 1910.)

Society met in regular session in the Assembly Room. Regular secretary being called away, Dr. C. R. Dancer was appointed secretary pro tem.

Dr. E. J. McOscar exhibited case, woman, aged 20 years, with soft tumor in right cheek, external to buccinator muscle and beneath the fascia, following injury at five years of age. Tumor soft, movable and never caused any inconvenience except cosmetic; contains a couple of hardened areas.

In the discussion Dr. Hamilton said he thought the growth was possibly simple cyst around parotid; and possibly stricture of Stenson's duct. Does not think it is a vascular tumor. It is certainly filled with fluid.

Dr. Rhamy said the concretions indicate cyst from deposits of salts. Vascular tumors could not form concretions.

Dr. Weaver thinks tumor is cystic, as if it were vascular it would disappear on pressure.

Dr. C. E. Barnett said the concretion is in proper position for occluded Stenson's duct. Treat surgically; open duct, remove concretions and leave wound open. Dr. B. Van Sweringen also discussed case.

Dr. Weaver exhibited case. Patient, man, aged 19; weight $159\frac{1}{2}$ pounds. First seen Feb. 8, 1910. Family history negative. Had measles in childhood, but no sequelae. Had tonsillitis three years ago in navy. Soreness under jaw began three weeks previous. Urethritis followed illicit intercourse, and later sore on lip with induration of submaxillary and sublingual glands.

Smear from sore on lips sent to Dr. Rhamy who found the spirochete. Sore began twenty-three days after cohabiting; patient denies having kissed anyone. Diagnosis, syphilis by contact. Dr. Rhamy exhibited the stained spirochete.

Discussion by Drs. Allen Hamilton, G. Van Sweringen, K. K. Wheelock, B. Van Sweringen, E. J. McOscar, C. E. Barnett, and closed by Dr. Weaver.

Dr. Wheelock called attention to the committee for entertaining the Indiana State Medical Association. The committee met, and wish the subject discussed by society.

Dr. Buchman moved that an assessment of \$5 per member be made to start fund for expenses of entertaining the State Association. Amended by Dr. B. Van Sweringen that this matter be brought before society in four weeks and acted on. Carried as amended.

Adjourned.

C. R. DANCER, Sec. Pro Tem.

(Meeting of Feb. 22, 1910.)

Society met in regular session in Assembly Room, with nineteen members present.

Dr. L. T. Rawles reported case of congenital hydronephrosis seen February 18. He was called in by another doctor who had partly delivered the woman. Used a large uterine dressing forcep to puncture the abdominal cavity, and this allowed the water to escape. Delivered and found a large congenital cyst of the left kidney. The arms and legs were flattened and not developed on account of the pressure.

Dr. Porter presented specimen, polycystic kidney, and gave case report of same. This condition made a very perceptible abdominal tumor in a middle aged man, but produced no symptoms except on one or two occasions when there was a little blood in the urine. Was called into the case on account of sudden obstruction of bowels. On section came onto this tumor. Man died at end of 72 hours, never having passed any urine; died of anuria. Dr. Porter said there should be a line drawn between hydronephrosis and polycystic kidney. The older the condition the fewer the cysts, as the walls of the cysts become absorbed or the cysts break into each other. The cysts in interstitial nephritis are small and the condition usually affects both kidneys. In treatment it should be remembered that in a number of these cases the condition is double. Should not remove kidney without testing out the other kidney as to competency. Often these cases can be tided over by wide incision, opening up a number of the cysts, and they go along fairly well for some time.

Discussion by Drs. McOscar, English, Weaver, C. E. Barnett, and closed by Dr. Porter.

Case reports. Dr. Wheelock reported orbital headaches which showed marked relief from K. I. and bromid of potassium. He also reported two cases in which the eyeball was burned with molten metal, in which no demonstrable lesion of cornea or retina was discoverable, but blindness was present afterward. He believes that employers would do well to have a record of the eyesight of employees before putting them to work.

Discussion by Dr. Havice.

Dr. Bulson. Case 1: Patient, man, examined for partial loss of hearing. Had been thrown against head of boiler, but his head was not struck. He claimed that spine was injured and that this affected his hearing. On posterior wall of pharynx, right side, was a large syphilitic ulcer, and higher up on left side were evidences of old ulcers. The partial loss of hearing, from

which the patient suffers, is due to a disease of the sound conducting apparatus, the cause of which is probably syphilis.

Case 2.—Was called to see man suffering from ear complications: was unconscious. Had had chill. At examination temperature was 104. Right drum intact. Left much congested but not perforated. Very little evidence of involvement of mastoid as far as external evidence was concerned. Lanced ear drum and obtained pus. Temperature dropped to 101. Twelve hours later there was facial paralysis left side. Man died. Autopsy revealed purulent meningitis. Infection had traveled from middle ear cavity. Case proves folly of waiting for rupture.

Dr. Bulson reported further progress of case of rupture of globe from injury reported some time ago. Since the subsidence of the chemosis and ecchymosis the tear is at least one inch long. She now has hernia the size of a bean, but she has useful vision.

Dr. Bulson also reported two cases of men burned by steam, with resulting loss of the epithelial layer of the cornea. Complete regeneration of the epithelial layer followed healing in both cases. They both entered suit for damages, claiming impairment of vision as result of the accident, but it was found on examination that the impairment in the one case was due entirely to an old choroiditis, while the other case had absolutely normal vision.

Dr. Calvin reported case of woman aged 37, married, two sisters died of tuberculosis. Dr. Calvin was called in because she had aborted. Fetus of about three months had passed, but membrane had not. Her menstruation in November was normal; December 10 profuse menstruation; in January at regular time slight; none in February. Was under care of a physician. For past two months developed a cough, and scanty expectoration, without any definite symptoms. Sputum examination negative. No tuberculin test made. Abortion was accidental. Has been having temperature of 100 to 101 for last two months. Since abortion and curettement cough and fever have disappeared.

Discussion by Dr. McOscar, Hamilton, Bulson, Havice, B. Van Sweringen, and closed by Dr. Calvin.

Dr. Chas. E. Barnett exhibited a case he had operated for refracture of patella. Patient slipped on curbing, fracturing the patella, Feb. 15, 1909. On February 27 operated, making a horseshoe flap. Uninterrupted recovery, and by Jan. 1, 1910, flexion was almost normal. Jan. 17, 1910, patient came to hospital, having slipped on the ice and again fractured the patella. Incision was made through old scar. Patient recovered from second operation with less pain and discomfort than experienced after the first. On the twenty-seventh day cast was removed and patient permitted to get out of bed and walk around.

Application of Dr. Hosford read and referred to board of censors.

Adjourned.

J. C. WALLACE, Sec.

DAVIESS COUNTY.

The Daviess County Medical Society, at its December meeting, elected the following officers for 1910: President, C. P. Scudder, Washington; vice-president, S. L. McPherson, Washington; secretary-treasurer, T. F. Spink, Washington; censor, G. W. Willeford, Washing-

ton; delegate, A. B. Knapp, Washington; alternate, W. O. McKittrick, Plainville.

Adjourned.

T. F. SPINK, Sec.

* * *

The regular annual meeting of the Daviess County Medical Society was held January 6, with seventeen members and eight visitors present. Dr. D. W. Bell, Glen Dale and G. E. Parr of Washington, were admitted to membership. Interesting papers were read by Dr. J. W. Anderson, Odon, on "Peculiarities of Diseases in Children;" by R. J. Danner, Elnora, on "Gonorrhea in the Male, Prophylaxis and Treatment," and by Dr. Maude Arthur, Washington, on "Fletcherism." Dr. John H. Oliver of Indianapolis paid an eloquent and scholarly tribute to Oliver Wendell Holmes.

In the evening a banquet was enjoyed at the Tyatt, Dr. O. K. McKittrick, Plainville, acting as toastmaster. Talks were given by Mayor J. W. McCarty, Hon. M. S. Hastings, Rev. F. A. Steele, and Drs. J. H. Oliver, Henry Gers, G. W. Willeford and J. W. Parks.

Adjourned.

T. F. SPINK, Sec.

ELKHART COUNTY.

The Elkhart County Medical Society held its special annual meeting on the afternoon of February 3 in Goshen. In addition to membership there were present about forty guests. After usual routine business a motion prevailed to extend to the widow and friends of the recently deceased Dr. P. D. Harding an expression of sympathy.

Dr. C. A. Daugherty, of South Bend, read a paper on some of the newer things in the etiology and diagnosis of gall-bladder disease, reporting some of his own experiences and the difficulties encountered in the wide variety of cases necessary to be operated on. Except in cases of malignancy, micro-organisms are the chief etiological factor. How the organism gets in is not known; probably by way of the ascending duct, the lacteas or the cystic artery and portal vein. Gall-bladder disease is always preceded by illness of some kind; jaundice is of little value in diagnosis and is infrequent. He reported two cases with long continued symptoms but not diagnosed for more than two weeks before operation. Surgical symptoms are pain, colic, nausea, vomiting, fever, tumor. In operating the general tendency is toward conservation, but one should be sure to remove all the stones and to explore the hepatic and pancreatic ducts.

Discussion by Drs. Ross, Gilbert of Kendallville, and Porter, Fleming and Kuhn of Elkhart.

Dr. E. H. Pratt of Chicago, gave a talk on "Suggestive Therapeutics." During his remarks he said that all diseases were cured by suggestion, that the physician never cured any disease; that the health producing properties were all inside the patient. He said as body patchers the physician too often paraded disease before the patient and left health entirely out of the question. Health is the only thing that cures. The knife in the surgeon's hand is a suggestion, electricity and massage are suggestions; the physician's personality is a suggestion. He expressed surprise that physicians made so little use of the sympathetic nerve in the cure of disease. The sympathetic force is the force that does all the sweating, breathing, circulating and eliminating. It is the force that dominates all bodily commerce by means of the tubes of the body. In part, the author said, "If this is the steam of the body, do

you not think the study of the waste and repair of the sympathetic nerve ought to be most important of medical consideration, and has it not been in your experience and in your medical education the least important? In your college did they lay any stress on the consideration of the sympathetic nerve or the involuntary muscles? Did they not spend most of their time with osmosis chemism, forgetting that chemism cannot act unless there is something to act on? The blood stream has to be there, it has to meet the tissues, to meet the nervous forces in order that the electrical currents of the body shall be generated; and it all depends on the blood stream. The tubes of the body carry on all its commerce except the chemism and osmosis, and the steam that runs those tubes is the sympathetic nerve." Dr. Pratt also said that official surgery is the greatest force in the domain of medicine, simply because it flushes the capillaries.

Dr. H. T. Patrick of Chicago spoke on "Apoplexy." He called attention to and differentiated four pseudo-apoplexies, brain tumor, the pseudo-apoplexy of uremic conditions and the less common condition in multiple sclerosis. In the apoplectoid attacks of general paresis there is nearly always a history of mental failure, of emotional or intellectual change, the Argyll-Robertson pupil and absence of deep reflexes. As the attack passes off there is a mental improvement. Greater difficulty in differentiation is met when the apoplectoid attack in general paresis occurs early. In brain tumor there is a gradual progressive headache before stroke with a double optic neuritis. A true apoplexy stroke is caused either by hemorrhage or thrombus, and it is essential to differentiate the two forms, either for treatment or prognosis. Those caused by thrombus are many times more frequent. Those that die in attack or within a few days are usually due to hemorrhage. Those occurring between the ages of 20 and 40 years are usually syphilitic, for brain syphilis almost always occurs within five years of the initial lesion. Miliary aneurysm is a factor in the production of hemorrhage. It is a disease of middle life and is associated with small granular kidney, hypertrophied heart and increased blood tension. Arteriosclerosis and atheroma, associated with myocarditis, fatty heart, valvular disease, low tension pulse, coronary disease and cardiac malnutrition and angina—a disease of old age—results in thrombosis. Prodrômes are absent in hemorrhage, present in thrombosis, and consist of temporary symptoms such as aphasia, numbness, stiffness of tongue, and dizziness. A complete hemiplegia without loss of consciousness is never due to hemorrhage. Monoplegias are due to thrombosis. In thrombosis there may be a local convulsion—no rise in temperature; in hemorrhage a general convulsion and rise in temperature. As to treatment, in those attacks due to hemorrhage, keep ice to the head, keep head high, purge, perhaps bleed; if due to thrombus do not bleed nor purge, nor put ice to head, but keep the head low, give plenty of fluids and keep up nutrition.

Dr. J. P. Simonds of the laboratory of the State Board of Health spoke informally of the work of the laboratory and the manner in which it may be of service to the general practitioner. Beyond doubt the laboratory is not sufficiently appreciated by many physicians, and when its province and methods are better understood it will become one of the most helpful of agencies for diagnosis and the improvement of sanitation.

In the evening a banquet was held in the Jefferson Café, at which toasts were responded to by Drs. C. W. Frink of Elkhart, C. B. Lake of Wolcottville, H. F. Mitchell of South Bend, W. B. Kreider of Goshen, H. A. Barbour of Bristol and Judge J. S. Dodge of Elkhart.

Adjourned.

A. A. NORRIS, Sec.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held February 22. Dr. G. W. Anglin of Warsaw read a paper on "Pathology, Symptoms and Treatment of Burns, with Case Report." Dr. Burket of Warsaw, in discussing the paper, spoke of the value of bicarbonate of soda in light burns. He also recommended castor-oil and the use of iodoform in sterile vaselin. Dr. F. J. Young of Milford suggested the following: (a) Carron oil and absorbent cotton for 24 to 36 hours, then sterile vaselin; (b) etherize and trim off charred tissue and dress aseptically; (c) nitrate of silver gauze—1 per cent. solution. Dr. Yocum of Mentone, president of the society, spoke of the value of sterile vaselin. Dr. C. E. Thomas, Leesburg, mentioned the value of stearate of zinc powder in the treatment of large burns. Dr. W. L. Hines, Warsaw, advised raw linseed oil and soda made up into a mush and applied. Dr. L. W. Ford, Syracuse, called attention to the possibility of producing ptyalism by the use of bismuth subnitrate in the treatment of burns.

Dr. L. W. Ford, Syracuse, was the essayist on the subject, "Diabetes Mellitus—Prognosis and Food Tolerance." In the discussion which followed Dr. Burket spoke of the value of nitroglycerin, but considered the prognosis very bad after the symptoms have become well established. Dr. C. C. DuBois, Warsaw, cited the case of a patient whom he had observed, who had first applied for medical relief in September. At that time the general condition was apparently good, but the urine was found to be loaded with sugar. He died in January in a diabetic coma. Dr. E. E. Haworth, Claypool, spoke of the three main types of the disease from the pathological standpoint—the alimentary, pancreatic and nervous types. He also spoke of the value of a proteid diet and alkaline drinks in the treatment of the disease. Dr. Thomas mentioned the fact that sodium salicylate will sometimes produce sugar in the urine. Dr. C. N. Howard, Warsaw, spoke of the need for care in considering the simple finding of sugar on a first examination as absolutely indicative of the disease, because frequently patients will have sugar as result of an increased ingestion of carbohydrates, particularly around Christmas time. The sugar in the urine then disappears when the amount by mouth is lessened.

Dr. C. W. Burket, Warsaw, read a paper entitled, "The Use and Abuse of Forceps in Obstetrics." In the discussion Dr. C. T. Long, Pierceton, brought out the point that he did not believe in applying forceps simply to save his own time; but uses them more particularly where there is failure of expulsive force and patient is getting worn out. As Dr. Burket has had an unusually long and successful experience with forceps, covering a period of over forty years, much of the discussion was taken up with questions and answers.

It was decided that Dr. DuBois be instructed to procure a blackboard for the use of the society.

Adjourned.

C. NORMAN HOWARD, Sec.

LAKE COUNTY.

Lake County Medical Society met in regular session in Hammond, January 6. Amendment made to Section 2 of by-laws, changing time of meeting from first to second Thursday of each month.

Dr. J. R. Simonds of Indianapolis read a paper on "Facts Concerning Diphtheria Revealed by Laboratory Examinations at State Laboratory." Some practical points brought out were: 1. Systematic school inspection followed by treatment of pathological throats. Many of these may be diphtheria carriers. 2. The fact that a large number of cases diagnosed not diphtheria clinically prove positive on bacteriological examination and vice versa demonstrates the importance of taking cultures from every sore throat regardless of age or severity of symptoms, as also those who have been exposed to diphtheria. 3. All cases with positive findings should be quarantined whether having clinical symptoms or not. 4. An arbitrary time limit of quarantine in diphtheria is not justifiable. Release should be governed by results from throat culture.

An informal discussion by all of the members present followed, with reports of cases.

Dr. W. Weisser of Indiana Harbor and Dr. White of Hammond were elected to membership.

Adjourned.

H. C. GROMAN, Sec.

MADISON COUNTY.

The Madison County Medical Society met in regular session at the library in Alexandria, with the vice-president, J. E. Hall, in the chair and eleven members present. Dr. L. F. Schmauss presented three cases, carcinoma of the breast, sarcoma of scalp, and gunshot wound of the hand.

Adjourned.

ETTA CHARLES, Sec.

MONTGOMERY COUNTY.

The regular meeting of the Montgomery County Medical Society was held at Crawfordsville, February 15. Papers were read by Drs. J. C. Burkle of New Ross, J. S. Beatty and G. T. Williams of Crawfordsville. Dr. Burkle's theme was the "Etiology, Symptoms and Diagnosis of Diphtheria." "The Treatment, Prophylaxis and Prognosis of Diphtheria" were presented by Dr. Beatty, and Dr. Williams discussed the subject of "Tonsillitis. A general discussion followed.

Several members of the County Nurses' Association were present as the invited guests of the society.

The subject for discussion at the March meeting will be "Organic Heart Disease."

Adjourned.

J. L. BEATTY, Sec.

RANDOLPH COUNTY.

The Randolph County Medical Society met in the Court Library, Winchester, Ind., Jan. 11, 1910, with fifteen members present. The essayist of the day was Dr. C. S. Bond of Richmond, Ind., who gave a talk and demonstration on "Blood Pressure and Its Consequences."

* * *

The Randolph County Medical Society met in regular session at the Federal Club in Union City, Ind.,

February 8, with eighteen members present. The papers were by Dr. Frank Smithies, of Ann Arbor, Mich., on "Simple Gastric Hyperacidity;" Dr. Thomas C. Kennedy, Indianapolis, president of the Indiana State Medical Association, on "Injection Treatment of Hemorrhoids;" and Dr. Fred McK. Ruby of Union City, "President's Address."

Adjourned.

C. L. BOTKIN, Sec.

BOOK REVIEWS**THE SAUNDERS CATALOGUE.**

W. B. Saunders Company, the medical publishers of Philadelphia and London, have just issued a new edition—the thirteenth—of their handsome Illustrated Catalogue. It contains some twenty new books and new editions, and besides numerous black-and-white illustrations, there are two color cuts of special value. We strongly advise every physician to obtain a copy—sent for the asking. It will prove a ready guide to good medical books—books that we all need in our daily work.

EXAMINATION OF THE URINE: A Manual for Students and Practitioners. By G. A. De Santos Saxe, M.D., Instructor in Genitourinary Surgery, New York Post-Graduate Medical School and Hospital. Second edition, enlarged and reset. 12 mo of 448 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$1.75 net.

Among the numerous works on analysis of the urine now published, the second edition of Dr. Saxe's work deserves a foremost place.

In this edition the new subjects introduced are the Cammidge reaction, a section on pentoses, a description of the methods of preserving and staining urinary sediments, and of preparing sediments for bacteriologic examinations, and researches on urethral shreds, vesicular sago-bodies, etc.

The portion devoted to the clinical side of urine analysis has been amplified somewhat. A new chapter on diabetes, as well as one on the toxemias of pregnancy, are of interest.

In the account of the present-day methods of functional renal diagnosis, considerable space is given to eryoscopy, a method that has fallen into disuse because of its unreliability.

The general practitioner as well as the student will find this a comprehensive treatise and a reliable guide in urinary analysis.

TREATMENT OF THE DISEASES OF CHILDREN. By Charles Gilmore Kerley, M.D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Second revised edition. Octavo of 629 pages, illustrated. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$5.00 net; half morocco, \$6.50 net.

The appearance of a second edition within relatively so short a time from the initial one, speaks well for the reception accorded Dr. Kerley's very practical work on pediatric treatment.

In the new edition there has been a very satisfactory rearrangement of certain sections that are in thorough keeping with the purport of the work, viz., convenience for ready reference.

In places the work has been abridged, as in the omission of certain illustrative case reports, while enough

has been added to bring the total number of pages over thirty more than in the first edition.

The enumeration of the various general rules to be observed in sickness is most commendable as is the condemnation meted out to the use of artificially-soured and buttermilk as a substitute for modified cow's milk, the criticism having been based on definite series of observations undertaken by the author with disastrous results.

The work remains, as in the former edition, one of the most practical and satisfactory contributions of its kind that has yet appeared.

A PRACTICAL TREATISE ON OPHTHALMOLOGY. By L. Webster Fox, M.D., LL.D., Professor of Ophthalmology in the Medico-Chirurgical College, Philadelphia, etc. Cloth. 810 pages. Price, \$6. D. Appleton & Co., New York and London, 1910.

This work is a worthy successor of Dr. Fox's "Diseases of the Eye," which appeared in 1904, and was the outgrowth of a series of lectures delivered by the author at the Medico-Chirurgical College and Hospital. This latter work is a comprehensive treatise on ophthalmology in which not only the author's own views of ophthalmology and methods of treatment have been freely incorporated, but in which has been included references to the many researches and advances which others have made in this department of medicine and surgery in recent years.

As might be expected from one of such wide experience and undisputed operative skill, the discussion of operative measures is particularly comprehensive and interesting as advocating the latest and most approved methods and technique, though the latest therapeutic measures which have yielded reliable results in combating ophthalmic diseases have also been given fully and comprehensively.

Very valuable and well written chapters are those relating to the bacteriology and pathology of the eye, and a special chapter devoted to laboratory technique in which the most approved methods of preparing and staining bacteriological and pathological specimens is given, will prove particularly valuable to the student or practitioner who is just beginning ophthalmological work.

Six colored plates and over three hundred illustrations in the text, many of which are original, add materially in giving a thorough understanding of the subject under discussion.

MYOMATA OF THE UTERUS. By Howard A. Kelly, M.D., Professor of Gynecologic Surgery at Johns Hopkins University, and Thomas S. Cullen, M.B., Associate in Gynecology at Johns Hopkins University. Large octavo of 700 pages, with 388 superb original illustrations by August Horn and Hermann Becker. Philadelphia and London: W. B. Saunders Company, 1909. Cloth, \$7.50 net; half morocco, \$9.00 net.

No better denomination can be given to this work than to say that it is truly a classic upon the subject of uterine myomata. Based as it is upon a grand total of 1,674 cases with histories and histologic findings almost complete, and supplemented by an unusually rich postoperative record of patients treated, the gynecologist should count himself fortunate indeed to have available this wealth of data. One can readily believe, upon careful perusal of the volume, that the ten years spent by the authors in the study of their material

preparatory to publication, have been busy ones indeed, but remuneration is at hand in the gratitude that is due from the profession for the excellent service rendered.

The volume deals almost exclusively with the work done by those connected with the gynecological department of the Johns Hopkins Hospital and of the Johns Hopkins University, from the opening of the hospital in 1889 to Jan. 1, 1909, a period of twenty years; and while much of the earlier data was incomplete, yet it has all been gone over, recent and more complete pathologic examinations were made, where indicated, and an earnest effort made to bring all records up to the maximum degree of accuracy.

Not the least commendable feature of the work is that their mistakes and failures have been given the same or even greater emphasis by the authors than their successes, and this factor alone adds greatly to the value of the work. One of the world's greatest operative gynecologists on the one hand, and, on the other, a surgical pathologist, especially as relates to gynecology, should be, and are, able to teach as much by their failures and errors as by their cures, for their mistakes are, in the main, those for which there has been ample reason. An instance of this latter statement is the case cited of hysterectomy upon a pregnant uterus, where, although from the appearance of the organ pregnancy was suspicioned, yet the history and physical findings were such as to lead most any obstetrician to exclude pregnancy.

The work abounds with so much that is interesting and instructive that one hardly knows what features to emphasize in a short review.

The mortality record of the series is certainly illustrative of the progress that surgery of the uterus has made, in that whereas the total mortality of the series, taking all cases from 1889 to 1906, was between 5 and 6 per cent, that of the last two and a half years, July 1, 1906, to Jan. 1, 1909, was less than 1 per cent.

Sarcomatous changes were found taking place in fully 1 per cent. of all myomata removed, while in over 2 per cent. there was associated with the myomata carcinoma of the fundus. These points are sufficient to emphasize the importance of immediate examination of the specimen removed in any but the most radical operations upon the uterus.

One of the most interesting features of the work is the analysis of the autopsy records as concerns uterine myomata, from the opening of the hospital in 1889 to July 1, 1906. Out of 2,740 autopsies held, complete data are available in 2,729 cases, certainly a remarkable showing. From this study we learn that in about 20 per cent. of all women 20 years of age or over, coming to autopsy, the uterus is the seat of a myomatous growth, and that while only 10 per cent. of white women are thus affected, 33.7 per cent. of all black women of the age mentioned are subjects of uterine fibroids.

The illustrations in the work are most excellent, coming as they do from the hands of Messrs. Horn, Becker and Brödel, which, as the editors remark, precludes further comment.

One or two slight typographical errors have crept in, but on the whole the work of the publishers is in thorough keeping with the excellence of the contents.

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VOLUME III

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NUMBER 4

ORIGINAL ARTICLES

VACCINATION PROPHYLAXIS IN TYPHOID FEVER.*

METIUS M. ECKELMAN, A.B., M.D.
ELKHART, IND.

My only apology for presenting this paper to-night is that, having failed to offer voluntarily a subject to help make up the first half year's program, your committee assigned this subject to me. I have had no personal experience with antityphoid vaccination, and the matter given you has been gleaned from the literature with the hope of acquainting you with the subject from its inception to the present date, as well as with the general principles necessary for its correct understanding.

In 1798 Jenner announced his discovery of vaccination as a prophylactic against smallpox. By referring to our text-books we see that smallpox is classified as an infectious disease, along with typhoid, malaria, and a host of others. And by an infectious disease we understand one whose causation is bacterial, or rather micro-organismal, whether the micro-organism has been isolated or not. And so, as smallpox is placed in the same category with typhoid and other infectious diseases, the question naturally arises, Does it not seem strange that so many years intervened between the discovery of vaccination for smallpox and vaccination for other infectious diseases? To this question we readily answer, No, for we know that the discovery of vaccination in smallpox was not one of a truly scientific nature, but rather a haphazard discovery. And, furthermore, we know that we do not understand by vaccination as applied to smallpox what we understand by vaccination as applied to typhoid and

other infectious diseases. In the one it is cowpox; in the others it is the bacterial vaccines, or what we sometimes call the "bacterins." We see, therefore, that the investigations carried on in the infectious diseases at the present day are truly scientific. They depend largely upon a knowledge of bacteriology and upon that department of bacteriology which we know as immunity. And in order to understand our subject to-night it is necessary to review briefly certain of these principles of immunity—principles which, thanks to the American Medical Association's post-graduate studies pursued in this academy last winter, are quite at my tongue's end.

By immunity we mean the power to resist disease—divided into *natural* and *acquired*. Natural immunity—the inherited immunity of certain species and varieties of animals. The lower animals cannot become infected with scarlet fever or measles, nor man with chicken cholera. It is also inherited family or individual immunity. Some families are immune from tuberculosis, or one child may contract scarlet fever, while a brother or sister, living under exactly similar conditions, may escape it.

Acquired immunity—that immunity which protects one from a second attack of the same disease—divided into *active* and *passive*. And here let us try to get a clear conception of what is meant by active immunity and what is meant by passive immunity. Dictionaries and text-books do not appear to make the matter clear. By active immunity is meant the immunity which is produced by injecting the bacteria or toxins directly into the one to be acted upon, while by passive immunity we mean the immunity produced by the injection of ready-made immunizing substances prepared through the serum of other animals. In the preparation of the various antitoxic and antibacterial serums for commer-

* Read before the Elkhart Academy of Medicine, Nov. 16, 1909.

cial use (diphtheria antitoxin, for example) a condition of active immunity is deliberately produced in the animal by the injection of the toxins or of the bacteria, while the serum of that animal injected into man produces a case of passive immunity. Both active and passive immunity may be either *antibacterial* or *antitoxic*. In the antibacterial we have the bacteria secreting soluble toxins, the bacteria themselves remaining intact. As in the case of tetanus, the soluble toxin is secreted by the bacteria in the wound where they reside. This poison or toxin is carried from the wound to the nervous system through the lymphatic or blood circulation, the bacterium itself not being transported. By the introduction of an antitoxin we have this soluble toxin neutralized without necessarily injuring the micro-organism itself. In the antibacterial we have no soluble toxins secreted by the bacteria, but the poisonous substances seem to be integrally associated with the bacterial protoplasm. They are spoken of as intracellular toxins, or endotoxins. These endotoxins are liberated only after the bacteria have been killed and dissolved. To those of us to whom the bacterial vaccines are unfamiliar we wonder what they are, and think at once that perhaps they are like the antitoxin of diphtheria. This leads us, then, to formulate our own definition of a "vaccine" and of an "antitoxin" according to these terms of immunity. By a "vaccine" we mean a substance composed of bacteria inoculated into the human system for the purpose of producing an acquired active antibacterial immunity. By an "antitoxin" we mean a suitable serum of another animal inoculated into the human system for the purpose of producing an acquired passive antitoxic immunity. We see that an antitoxin, then, is capable of producing only a transient immunity, that is, one lasting only a few hours to a few days, while a vaccine is one capable of producing a more lasting immunity—one extending over a period of from six months to two or three years. For any infectious disease, then, capable of forming either an antitoxin or a vaccine, we see that the vaccine is the more preferable because it produces a more lasting immunity. The leading diseases for which antitoxins can be formed are diphtheria and tetanus, and the leading diseases for which vaccines can be formed are typhoid, cholera, plague and anthrax.

We should also mention the law of phagocytosis. The great Metchnikoff observed that the successful resistance of an animal against bacteria depends upon the power of certain white blood corpuscles known as phagocytes to destroy

the invading bacteria. And then comes Wright, who goes a step further and explains that this power of phagocytosis is due to certain substances in the blood which he calls "opsonins."

I have just stated that the principal diseases for which vaccines can be formed are typhoid, cholera, plague and anthrax. It is interesting to see how typhoid vaccination came about. It was Pasteur who first adopted preventive inoculation in the case of anthrax by the use of cultures of living attenuated micro-organisms. It was Haffkine who next made preventive inoculations against cholera and plague along the same lines as Pasteur. Haffkine, knowing of Wright's large experience with typhoid fever in the British army, suggested to Wright that he carry out the same treatment in typhoid by the use of living attenuated micro-organisms. But here is just where Wright balked. He said he would not run the grave risk of disseminating the germ of the disease and of producing the disease in a very grave form in a patient especially susceptible to the infection by the use of living bacteria; that if such a grave experiment as that were expected to be carried out at his hands, it would never be carried out at all. But about this time Wright was in communication with Professor Pfeiffer, who told him he was able to produce in man the specific agglutination reaction to typhoid by the subcutaneous inoculation of *heated* typhoid cultures. This changed the situation and led up to Wright's discovery of the production of typhoid vaccine by the use of dead bacteria instead of living, the first two cases of which he reported in the *Lancet* in September, 1896.

In considering the mechanism of typhoid vaccination we find that it is of a chemical nature, but just what its chemistry is is still involved in obscurity. It has to do with the protoplasm of the typhoid bacillus, and especially with the proteid elements of that protoplasm. As far as we now know, the process of immunization in typhoid is a specific reaction on the part of the body cells to the protein molecule making up the cellular structure of the bacterium. We know that by the introduction of a vaccine we have certain antibodies formed; or what Wright calls antitrophic elements or more briefly antitropins. The inoculation of bacterial elements is responded to by the elaboration of bacteriotropic elements. By inoculation with the typhoid bacillus we have typhotropic elements formed.

And let us see in what different ways the antitropins may render protective service to the organism.

1. An antitropin may combine with the chemical element to which it stands in antitropic rela-

tion (and such an element we call a conjugin) in such a manner as to throw it out of solution. An antitropin which undertakes this office is technically called a "precipitin."

2. In the case where the conjugin is a poisonous element, the antitropin may combine with it in such a manner as to deprive it of its toxicity. An antitropin which undertakes this office is called an "antitoxin."

3. In the case where the conjugin is a constituent of a formed element an antitropin may combine with it as to cause the formed element to agglutinate when immersed in a sufficiently strong salt solution.

4. An antitropin may modify the particular formed element to which it stands in antitropic relation in such a manner as to render it attractive food for the white corpuscles. An antitropin which performs this office is called an "opsonin."

5. In the case where the conjugin forms one of the constituent bonds of the "vital ring" of the protoplasm the combination of the antitropin with the conjugin may involve the shattering of the whole chemical structure of the protoplasm. An antitropin which combines with its conjugin in such a manner as to bring about this chemical disintegration may, in the case where the bacteria are the formed elements under consideration, be spoken of as a "bactericidal" substance.

6. An antitropin which disintegrates a complex molecule in such a manner as to resolve it into soluble elements is technically called a "lysin." When it brings into solution the protoplasm of the bacteria it is spoken of as a "bacteriolysin."

7. In the case where the conjugin forms a constituent bond in the "vital ring" of the protoplasm, and where it further constitutes, when set free, a poisonous element, the antitropin, while it shatters the structure of the molecule by entering into chemical combination with its conjugin, may at the same time quench the toxic properties of that conjugin. An antitropin which fulfils this double office is at one and the same time a bactericidal substance and an antitoxin.

In good plain English, then, we see that the antitropins may agglutinate, kill, dissolve and otherwise destroy the bacteria, and are called, as the case may be, agglutinating, bactericidal, bacteriolytic, antitoxic and opsonic antitropins.

What we desire from antityphoid vaccination is that it shall, if possible, ward off the typhoid attack; failing in this that it shall at least mitigate the attack. The successful treatment of the former involves the devitalization of the typhoid bacillus immediately upon its entry into the system of the patient. The successful achievement

of the latter involves the devitalization of the typhoid bacillus as soon as may be after it has effected a lodgment in the system. For the attainment of either the former or the latter purpose the system must be furnished with typhotropic elements. While the achievement of increased bactericidal power must in all cases be the primary object of concern, it is desirable as a secondary object to aim also at the neutralization of the toxic elements of the bacterial protoplasm, which are set free in the case where the typhoid attack is not completely warded off. This contingency will be provided for if we can furnish the organism with antitropins which will perform in addition to the office of devitalizing the typhoid bacillus also that of quenching the poisonous elements of the bacterial protoplasm which pass into solution when the typhoid bacillus is broken up in the organism.

In order to induce the organism to furnish the bacteriotropic substances which it will require when it is confronted by the typhoid bacillus, we must introduce into the body the *constituents of the protoplasm* of the typhoid bacillus as distinguished from the metabolic products which may have been elaborated by the micro-organism in the course of its cultivation.

The bactericidal, bacteriolytic, agglutinating and other powers which may be developed in animals by the inoculation of living typhoid cultures and in man by the invasion of his system with the typhoid bacillus are obtained with equal facility by the inoculation of typhoid cultures which have been sterilized by heat.

Antiseptics and a temperature above 60° C. destroy the immunizing properties of a typhoid culture, while the vaccinating efficacy of a typhoid culture which has been heated to a temperature of from 53° to 60° C. is preserved, as is proved:

1. By the fact that the bactericidal power of the blood is increased—sometimes as much as 1,000-fold—as the result of a single inoculation of a suitable quantum of a sterilized typhoid culture.

2. By the fact that an increased bacteriolytic power is developed in the blood of patients who have been inoculated with a suitable quantum of such sterilized culture.

3. By the fact that a patient who has recovered from a first inoculation of a sterilized typhoid culture does not upon second inoculation suffer from the very severe constitutional symptoms which would occur in the case of an uninoculated person inoculated with a similar dose of typhoid vaccine.

4. By the fact that an increased opsonic power is developed in the blood of patients who have been inoculated with a suitable quantum of sterilized typhoid culture.

We have in these facts evidence of the elaboration of the antitropins desired; that is, those which exert a destructive effect upon the typhoid bacillus, as well as those which discharge the office of antitoxins to neutralize the poisons liberated.

The methods of preparation of the vaccine are entirely too technical to engage our attention in any detail. Briefly we may say that cultures of the bacillus are grown in bouillon for from 24 to 48 hours and then sterilized at from 53° to 60° C. for one hour. The contents of several flasks are mixed in order to obtain a uniform distribution of the organisms. A moment ago I stated that antiseptics have the power to destroy the immunizing properties of a typhoid culture. Very recent experiments by Dr. Stone of Toledo show that acetozone- alphozone- and carbolic acid-killed vaccines preserve their immunizing properties and require even a smaller dose than heat-killed vaccines.

Standardization has for its object the determination of the strength of one vaccine in terms of another vaccine, the dose of which has been determined by experiments undertaken upon man. In the earliest inoculations the virulence of the culture was in the first instance elicited by determining the fatal dose of that culture inoculated living into guinea-pigs of a standard weight of 250 grams. The amount of sterilized vaccine employed for the inoculation was then adjusted in such a manner as to stand in relation with the amount of agar-culture which constituted the fatal dose for 100 grams of guinea-pig. Standardization is accomplished at present by a simpler method of counting under the microscope the number of bacilli per c.c. which should yield within a 24-hour limit of growth, under favorable circumstances, cultivations containing 1,000 to 2,000 or more millions of bacilli to the c.c.

Dosage.—The original method of giving a single injection has been abandoned, and it is now customary to give two inoculations from 8 to 14 days apart, the first containing from 750 to 1,000 millions of bacteria and the second from 1,500 to 2,000 millions.

Site of Inoculation.—With a view to avoiding the pain caused by the serous effusion which takes place at the point of inoculation, it is advisable to insert the vaccine into a portion of the body where the skin is loose. The back of the shoulder and flank are convenient situations. Usually, however, the vaccine is inoculated into the arm

at the point of insertion of the deltoid. The usual precautions of sterilization of the syringe and the site of inoculation should be observed.

There occurs in every case, upon the inoculation of a vaccine, a "negative" phase, characterized by an impoverishment of the blood in antitropic substances. With this negative phase is associated a phase of increased susceptibility to bacterial infection. The negative phase is succeeded by a "positive" phase, characterized by the flooding of the circulating blood with newly-formed antitropic substances. This phase is associated with a maximum resistance to bacterial infection. This positive phase is followed by a reflow or sinking away of the inflowing wave, leaving behind it a permanent, or relatively permanent, high tide of immunity. The negative phase is usually of very short duration.

Symptoms.—The clinical symptoms which occur after antityphoid inoculation may be classed under the head of (a) local symptoms, i. e., symptoms at the site of inoculation, and (b) constitutional symptoms. Generally speaking the severity of the local symptoms is inversely as the severity of the constitutional symptoms. In cases where very severe constitutional symptoms have been produced, the local symptoms are conspicuously absent. Again, whereas in the case of first inoculations, constitutional symptoms have been well marked, second inoculations are frequently followed by nothing more than local symptoms.

Local Symptoms.—Where a suitable quantum of antityphoid vaccine, made from a suitable strain of typhoid bacillus, has been injected the local symptoms first make themselves felt after an interval of two or three hours. The effects then seen are the development of a red blush and more or less serous exudation at the site of inoculation, followed by some lymphangitis along the lymphatics which lead, according as the vaccine has been inoculated above or below the middle line of the trunk, in the direction of the glands of the axilla or of the groin. In a case where a very toxic vaccine was employed, distinct local effects supervened in a quarter of an hour, the congestion around the site of inoculation afterward assuming an almost erysipelatous intensity. Even such severe inflammation has never led on to suppuration. The coagulability of the blood is diminished, which, however, can be overcome by administering 30 to 40 grains of calcium chlorid.

Constitutional Symptoms.—Constitutional symptoms occur generally within 2 or 3 hours after inoculation. They are hastened and aggravated when muscular exercise is engaged in immediately after inoculation, or upon a fasting patient. With the doses of vaccine now used, the

constitutional symptoms are limited to some headache and 2 or 3 hours of real malaise. As soon as these symptoms have passed off—generally 5 or 6 hours after inoculation—the patient feels inclined for food and for sleep. The sleep which is obtained is somewhat broken. Next day his temperature comes down to normal, and he feels comparatively well except in the respect of pain at the site of inoculation.

The statistical results of typhoid inoculation have from the very start been very gratifying. In Wright's earlier statistics the incidence of typhoid fever was diminished by at least half in the inoculated. In certain other cases a greater reduction in the incidence of typhoid fever was achieved, a reduction varying from a 6-fold to a 28-fold reduction. In the aggregate the proportion of deaths to cases among the inoculated had been rather less than half that among the uninoculated. The latest statistics from the British armies show results as follows: Incidence per 1,000 among the uninoculated 21.32 as compared with 9.80 among the inoculated. Mortality per 1,000 among the uninoculated 5.18 as compared with 1.36 among the inoculated.

Duration of the protection varies from 6 months to 2, 3 or even 6 years, or in some cases even a lifetime.

In the U. S. Army voluntary typhoid vaccination began last December as a result of conclusions reached by the medical board appointed for the purpose. The conclusions reached by them are:

1. The board is convinced that the practice of antityphoid vaccination is both useful and harmless, and that it offers a practicable means of diminishing the amount of typhoid fever in the army, both in times of peace and war.

2. It finds that the experience to date with antityphoid vaccination justifies it in recommending the introduction of the practice in the regular and volunteer armies in time of war.

3. It recommends the immediate introduction of the practice of vaccination against typhoid in the Hospital Corps, the Army Nurse Corps, and in any expedition of troops from the regular army which is ordered to take the field for active operations; and, further, that an opportunity be given to volunteers from the army as a whole to be protected by vaccination against typhoid.

And let us see in what instances it is feasible to practice typhoid vaccination in civil practice. Typhoid fever has never been a world pest; and hence the occasion for universal vaccination does not exist. But in the presence of epidemics so frequently seen in our American cities it will be impossible to avoid the consideration of vaccina-

tion as a means of protecting the unaffected, especially for those cities in which typhoid is so extensive as to be called endemic. It is especially appropriate to vaccinate nurses, hospital attendants, physicians and others who are constantly exposed to typhoid infection. And especially that class of individuals known as "typhoid-carriers" who constitute about 4 per cent. of all persons who have had typhoid fever, and who are constantly disseminating the infection with the feces and urine for years.

FOUR OF THE MORE COMMON DISEASES OF THE EYE AND THEIR MAN- AGEMENT.*

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If this paper is found to be elementary, please remember that that is its very object. Its purpose is to take up such portions of the subjects of conjunctivitis, keratitis, iritis and cataract as may form a common ground for discussion for those of us who are out of touch with eye work, as well as for those of us who are out of touch with general practice.

For many years there has been a little group called the "eye, ear, nose and throat specialty," all traveling happily along together. More recently, however, the eye has grown restive and is claiming the privilege of a one-pointed specialty—clear, distinct, clean-cut, unassociated. The writer senses that in that exclusive eye field there must be keen pleasure for the workers and much peace and comfort for those who reach them suffering from ophthalmic lesions. This tendency, however, toward superspecialism makes it perhaps timely to recall again the ancient fact that, no matter how specialized a part of a body may become, it still does actually remain an integral part of that body. Thus the eye affects and is affected. Its primary troubles become secondary grievances to the rest of the body; while the pathology of some remote part finds a way to dim its vision and mar its beauty. Thus it brings its tribute of joy and sorrow. Thus it carries its portion of peace and pain.

Let us trust, therefore, that the specialist will never become so out of touch with general medicine that his patients will lose the value of being treated as an entity and not as a part. Let us also trust that the general practitioner will keep his mind alert to the value of careful first treatment of eye troubles.

* Read before the Thirteenth District Medical Society, at Warsaw, Ind., Nov. 19, 1909.

CONJUNCTIVITIS.

The patient comes into our office stumbling a trifle, half angry, half amused that such a little thing should be causing so much trouble, and announces: "Doctor, I have something in my eye."

Now, the conjunctiva is a mucous membrane. What might be expected if some of our other old mucous membrane friends (such as thirty feet of the digestive tract and the bladder) should be brought to the surface and have a piece of coal blown into them? You know what a rapid catarrhal condition would result, and therefore you know the result in a similar tissue in the eye.

Twisting a little cotton on a toothpick, dipping it into 4 per cent. boric acid solution and passing it over the foreign body will, in the majority of cases, make it adhere to the cotton and come away from the eye. Should it not be seen readily then the use of Berger's loupe is of help, for it enables us to see a magnified image with two eyes at once. If the foreign body is white great difficulty may be found in discovering it, and then going over the general region complained of, with the cotton, may catch it, or one can perhaps wash it out with the boric acid solution. Sometimes after the patient has complained of its being on the upper lid and search has failed to reveal it there, we may find it lodged in the cornea, scratching against the lid when closed. Should it refuse to come away from the cornea with the cotton, I find that by putting in three or four drops of 4 per cent. solution of cocain and using, with care, the point of a small knife (an old Graefe knife) it can be induced to come away. The conjunctivitis caused by the foreign body can be treated by washing the eye with boric acid solution before the patient leaves. A drop or two of 4 per cent. cocain can be instilled if much pain remains. Furthermore, the patient can secure an eyecup at the drug store for 5 or 10 cents and bathe the eye with more of the 4 per cent. boric acid solution at home. If a little more alkaline and volatile effect is desired, the following solution (which is much employed by Dr. Suker of Chicago, as well as by many other men) can be used, the ingredients being varied to suit the individual ideas of the physician:

Acid boric	gr. xl
Sodii biborat	gr. x
Aq. camph.	
Aq. menth Pip.....	āā ʒi
Aq. dist. q. s.....	ad. ʒiv

That makes a good, general, mild, antiseptic, cooling wash. Care should be taken that camphor water and peppermint water are obtained and not the spirits of them.

Even after its removal, patients will often feel that the foreign body still remains, due to the irritating resulting catarrh. This, of course, will pass away with the treatment of the latter.

It must be remembered that the conjunctiva normally harbors a number of bacteria. Most of these are friendly, although when their host becomes weakened through other causes they may take advantage of him. Some of the more virulent type of germs (such as the staphylococci, streptococci, pneumococci) are probably present in all severe forms of conjunctivitis, which accounts for their being contagious. At the Illinois Charitable Eye and Ear Infirmary in Chicago some of the men make it almost a routine measure of having secretions from the pronounced cases of conjunctivitis examined microscopically to determine the exact character of germs present.

The gonococcus is, of course, the one we fear the most. It has, through its ugly touch, blinded the eyes of between one- and two-thirds of all those who now live in darkness. A very sinister thing. A very frightful thing. The Cr  d   method of prevention consists, as you know, in instilling one drop of a 2 per cent. solution of nitrate of silver into each eye within a few minutes after birth. This should always be done. In France and Germany it is no longer left optional. It is the law in these countries. While there is no law compelling physicians in Indiana to use this preventive, our State Board of Health recommends that it be done, using either the silver nitrate or argyrol; and, as you will remember, the question is asked on each birth certificate: "Were precautions taken against ophthalmia neonatorum?" As this is part of the cruel crop which springs from the "sowing of wild oats," the real precautions would carry us back into decency and moral strength. There are probably many wild oats which would have remained unsown had the planter of them foreseen that part of his harvest would be not only the wife of his heart unsexed by way of the operating table, but the little child of his own blood groping in the darkness, moving patiently through the years, knowing only from others of the beauties of the world. Thus we see again how the broader view of the eye takes us out of its smaller compass back into the very pith of things.

In some of the cases of conjunctivitis, systemic conditions are directly to blame. We find, for instance, conjunctivitis sometimes coming to add its burden to our labors in combating measles, scarlet fever, smallpox, hay fever, grippe, eczema,

facial erysipelas, impetigo contagiosa, bronchitis, typhoid fever and rheumatism.

While, of course, a paper of this kind is not intended to be exhaustive, we ought perhaps not to leave this subject without mentioning "trachoma" or granular conjunctivitis. Patients suffering from this disease are so proverbially hard to cure, and some of them wander so forlornly up and down the medical world visiting the general practitioner, the specialist and everybody else in hope of relief, that it would be best perhaps to mention some of the things which are now being done. Dr. D. H. Coover brings forward in the *Ophthalmic Record*, No. 2, pp. 53-55, 1909, what he terms "A New Operative Procedure in the Treatment of Trachoma." He rubs pure sand-paper, free of glass, on the conjunctiva of the lids and folds, and is getting good results. It is done under a general anesthetic. Sulphate of copper rubbed over the offending surfaces is one of the oldest remedies used in this condition and has undoubtedly done good and will continue to do good in many cases. Bichlorid of mercury in solution of one to five hundred is used, the excess being washed off with boric acid solution. Dr. E. S. Thomson, under the caption of "Some Clinical Features of Trachoma," in the *Manhattan Eye, Ear and Throat Hospital Reports*, No. x, pp. 42-53, February, 1909, insists on the operative treatment, i. e., expression without previous scarification, using Knapp's roller forceps. Dr. A. Fortunati, in the *Klinisch Therapeutische Wochenschrift*, No. 23, 1909, pp. 565-571, speaks of "the radiotherapy of trachoma." He was led to begin his experiments with radium chiefly because of the favorable reports of such men as Cohn, De Gama, Pinto, Urthoff, Thielman and others. His own investigations apparently do not lead him to believe that it is curative, but that it makes the tissues more susceptible to the influence of any following therapeutic agent, such as copper sulphate. He used a capsule containing 3 mg. of radium bromid. Dr. C. W. Hawley of Chicago is a believer in the use of jequirity in those old cases in which other things have been tried, but which keep on sometimes getting a little better and sometimes a little worse. He uses one-half jequirity powder and one-half milk sugar. It is a very violent method and should, of course, be undertaken only after more peaceful means have failed. The patient should be told of the extreme inflammation which at first is produced, and his consent obtained before proceeding with it.

In attending to the local treatment of trachoma let us not forget that, while it has not been proven that the disease has a constitutional ori-

gin, still many of these people show signs of malnutrition and sometimes have tuberculosis. Therefore, excess of fresh air, proper diet, etc., etc., and tonics are about as essential in the treatment of this chronic disease as are those remedies which are purely local.

KERATITIS.

Let us remember that the cornea has no blood-vessels. It relies for nutrition on its lymph canals. It is for this reason that prolonged cold applications to the eye for any purpose must be made with caution. It is for this reason that in almost all cornea troubles hot applications are used. It is for the same reason that a generally depressed vitality sometimes declares itself, especially in children, in the cornea—a structure which you see in the most prosperous times of the body has to rely for nutriment on the courtesy of neighboring vessels.

Different names have been attached to the various stages and types of keratitis: phlyctenular, xerotic, herpetic, vascular, interstitial, punctata, profunda, filamentous, traumatic, ulcers, etc.

What interests most of us in a given case is to determine whether we have to deal with an inflammation of the cornea or simply a conjunctivitis. In conjunctivitis there is a bright, brick-red color to the eye, most marked at the junction of the eyeball and the lids (the fornix), least marked around the cornea. In keratitis and also iritis there are pink, straight little vessels, jutting out all around from the cornea like spokes from the hub of a wheel. In keratitis there is a little dulness, a little lessening of the transparency of the cornea; and while there is lacrimation it is not so apt to be mucopurulent as in conjunctivitis. In keratitis the lids do not feel so hot and heavy and they do not itch and smart so much. Pain and photophobia occur in both. The two diseases are, of course, very frequently associated.

Syphilis is responsible for 60 per cent. of the cases of interstitial keratitis, and the majority of the remaining 40 per cent. are due to tuberculosis. In addition to these two, disease of the nose, eczema, measles or other acute exanthemata, rachitis, general malnutrition, malaria, rheumatism and gout should not be left out of the reckoning by one who is treating any form of keratitis. The rest of the treatment consists in looking after any prior local disease; in the use of hot applications; in the keeping of the eye clean with boric acid or other antiseptic wash; keeping it languaged between the times of treatment, and such surgical procedures as the exact conditions require.

IRITIS.

Dr. P. H. Thompson, writing recently in the *Boston Medical and Surgical Journal* (No. 22, pp. 699-707, 1909, vol. clx) on "The Etiology and Diagnosis of Iritis," points out again that nearly all authors consider that 50 per cent. of all cases of iritis are due to syphilis. Some men put the percentage higher. He goes on to say that syphilis acts both as an exciting and predisposing cause. By its systemic effect the general resistance of the body is lowered, and by the local action of the *Spirochæta pallida* the iris is injured.

Next to syphilis, rheumatism is probably the great causative agent, 25 per cent. of all cases being due to it. Gout, gonorrhea, diabetes and tuberculosis, and, in fact, quite an army of general conditions mar the beauty and spoil the function of the iris. Diseases of the nose and mouth may cause it; and in the eye itself the serious involvement of any of its other structures means very shortly a succeeding iritis. Sometimes it comes across from the other eye as in sympathetic ophthalmitis.

The iris is in some respects similar to a serous membrane. It comes, therefore, into the same family group as the peritoneum and the pleura, for instance. Like these other structures, when inflamed, it throws out a little exudate. Now the iris normally lies loosely, like a curtain, against the anterior capsule of the lens, but this little sticky exudate oozing forth from the inflamed iris binds it to the capsule, thus forming a posterior synechia. If a mydriatic, like atropin, is given in time, it lifts the curtain up out of reach of the capsule (through dilatation of the pupil), and the exudate cannot bind it down. This shows the great value of our recognizing an iritis early before the damage has been done and while there is still time to prevent it by dropping into the eye at once one drop of a 1 per cent. solution of atropin, and repeating it in ten minutes if required.

A difficulty frequently arises in making a differential diagnosis between iritis and conjunctivitis. While there are several signs, probably the most helpful are the noting of the pink zone around the cornea mentioned under keratitis, and the sluggishness of the pupil. That is, a bright light thrown into the eye and then withdrawn and then a minute later reapplied, should normally find a pupil fairly large but rapidly growing smaller. In iritis there is either no motion or very sluggish motion. The pain is different than in conjunctivitis. While in both it is worse at night, still the pain of iritis is very markedly

increased at night and is generally more severe and stabbing in character.

The treatment of iritis consists largely in the use of atropin, hot applications, keeping light out of the eye, rest and the treatment of the underlying cause.

CATARACT.

Cataracts can be congenital, senile, traumatic or due to other diseases. Senile or simple cataract is the most frequent of them all. This comes about through the nucleus and lens fibers shortening and leaving spaces which fill with fluid; afterward the fibers swell, look cloudy and disintegrate. In a mature cataract the lens looks yellowish white and uniformly opaque. The patient is unable to read and cannot tell the character of objects, although sometimes he is able to count fingers. He should always be able to tell light from darkness, and, furthermore, he should be able to tell from which direction the light from the ophthalmoscope or electric bulb is coming. For unless he thus has light perception and light projection an operation will probably be of little service to him, because there is some other eye trouble which will not necessarily be improved by taking out the lens. Furthermore, even if the cataract is mature, so long as the other eye is giving excellent vision it is best not to operate, because the two eyes will not readily work together afterward.

The treatment of a mature cataract consists in the taking out of the lens, unless the difficulties just noted should be present. Different men have different ways of accomplishing this result. Personally I prefer doing what is called the combined extraction, that is, an iridectomy at the time of the operation. This method, I find, is the routine one adopted by some other men whose experience is far greater than my own.

Sometimes patients will wistfully ask if there is not something which can be done instead of an operation. In answering this the following facts may be borne in mind: Sometimes cataracts remain stationary and sometimes incipient ones pass away entirely. Connor, in 1907 (Trans. Section of Ophthal., A. M. Assn), showed that fifty-one observers had reported 147 cases in which transparency had returned to the lens in patients affected with incipient cataract. Dr. Edward Jackson has for years been telling his patients with incipient cataracts to drink freely of water, in order to favor elimination and to avoid eyestrain. He considers these two the most important things to do to check or prevent the development of cataracts. He states that "in many cases there has been no further increase of

the opacity, and in several cases there has been partial clearing of the lens."

Lately L. Konigstein, in *Wiener Medizinische Wochenschrift* (No. 22, pp. 1225-1230, 1909), under the heading of "The Non-Operative Treatment of Senile Cataract After Römer," states that Römer believes that senile cataract is due to faulty senile metabolism; and, therefore, sees the cure in supplying the affected individual with such organic substances as would correct the defective metabolism. For this purpose he uses lenses of calves, which biochemically are the same as human lenses, and either injects the lens extract or gives it per orem in the form of a specially prepared product called lentoealin.

His first series of experiments (six in all) was very successful, both objective and subjective symptoms showing considerable improvement. In four of the cases the vision was changed to 6/7.5 from 6/15; to 6/6 from 6/12; to 6/8 from 6/18; to 6/10 from 6/15.

DEGENERATE TONSILS: CAUSATIVE FACTORS IN PRODUCING NOSE, THROAT AND CONSTITUTIONAL AFFECTIONS.*

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PHYSIOLOGY OF THE TONSIL.

Normal tonsils offer one of the means by which the animal body resists the invasion of pathogenic micro-organisms, i. e., by assisting leucocytosis and giving off phagocytes. This function of the tonsils is operative only early in life; that is, up to the sixth or eighth year, when the tonsils attain full development. After this period the tonsils undergo atrophy, often disappearing by the age of fourteen or fifteen. If they remain an appreciable size they may be considered pathologic, having reached the degenerate state in their efforts to resist the invasion of bacteria.

From the latest literature in research work on the tonsil, it seems that the function of defense assumed by the tonsils in early life may establish a certain amount of immunity. We know that bacteria of many varieties may be cultivated in the crypts, which serve as culture tubes. Assuming that the tonsillar crypts are ideal living culture tubes, some have reasoned that the bacteria can cause a reaction, whereby, through the toxins, are produced antibodies, such as antitoxins, agglutinins, opsonins, etc., which, in turn, produce active immunity.

Degenerate tonsils are common. Nor is this surprising when we stop to consider their location and structure. Situated in an exposed place, this lymphoid tissue, with deeply corrugated surfaces and imperfect epithelial lining, is subject to infection by bacteria from nose, mouth, lungs, larynx and stomach. "Filters for bacteria" seems to be an appropriate name for tonsils. However, after they have served their purpose and become degenerate, there exists a "locus minoris resistentiae," as a local resistance to infection requires a healthy gland and mucous membrane with normal secretion.

PATHOLOGY.

In considering the pathology of degenerate tonsils, let us take up the diseased condition of the tonsil most frequently met with, namely, chronic lacunar or follicular inflammation; remembering, however, that other diseased conditions of the tonsil, such as tuberculosis, lues, abscess and actinomycosis, may be classified as degenerate tonsils.

Examination of a number of tonsils removed on account of chronic lacunar inflammation showed the following: Gross appearance *in situ*—Size variable, very large to quite small. Some surfaces were smooth and regular, while some were irregular and ragged. A number of the tonsils were so small and sunken that they were apparent only upon gagging or upon retracting the anterior pillar of the fauces. Sometimes, even when there was no evidence of a tonsil on inspection, a large mass was detected on palpation, especially at the upper part of the tonsil sinus, where the so-called head of the tonsil is located.

Some of these submerged tonsils were hidden from view by the overlapping of the pillars and the plicae, there being a complete union of the pillars in some cases, barely leaving an opening large enough to admit the point of a probe. Such tonsils on dissection proved to be much larger than apparent from the surface. On the other hand, some of the tonsils that appeared quite large in the throat turned out to be rather small after their removal, much to the surprise and disappointment of the patient. These latter tonsils have a substantial sclerosed cortex, and, being attached to the pillars, are well supported, so that when engorged they balloon out into the throat; but the inner structure or trabecular framework, being undermined by disease, gives way or collapses when the tonsil is removed. Such tonsils easily tear away from the basilar capsule when operated upon. It is a difficult matter, indeed, to take them out *en masse* with capsules attached.

* Read before the Indianapolis Medical Society, Feb. 8, 1910.

On inspecting the exposed portion of the tonsil, one's attention is first called to the crypts. Many of these are filled with yellowish-white, cheesy, foul-smelling masses about the size of millet seeds. The mouths or openings of these crypts are oftentimes covered or hidden by the *margo supratonsillaris*, *plica triangularis* and anterior pillar. In this way these decomposed masses are detained or harbored in the crypts, where they afford excellent culture media for bacteria, whereby local and constitutional affections can readily arise. The free edge of the palatal pillars, as also the *margo supratonsillaris* and *plica*, is often thickened and attached to the tonsil by inflammatory adhesions, the result of repeated attacks of tonsillitis.

After enucleation, the mucous membrane structures and also the fibrous capsule of the tonsil show up to greater advantage. The fibrous capsule, which completely and firmly envelops the hidden portion of the tonsil and merges into the mucous membrane of the *margo supratonsillaris* and *plica triangularis*, appears thickened and shows evidence of adhesions to the surrounding structures, especially in cases where there has been a history of repeated inflammation of the tonsil. A similar change is also noticeable in the so-called guillotined tonsils and those subject to repeated cauterization.

The minute inspection of the tonsil showed the crypts to be the seat of the most important histologic changes. Around these pockets or sinuses occurs a hyperplasia or proliferation of certain cellular elements, followed later by focal areas of necrosis. The cryptal epithelium showed disorganization, probably easily induced owing to its thinness. What should have been an intact line appeared to be broken disintegrated epithelium, which at places came into direct opposition with the lymph structure of the tonsil.

BACTERIOLOGY.

Degenerate tonsils constantly harbor bacteria, which, under suitable conditions, are capable of causing disease. It has been demonstrated that the tonsils can be infected by cultures applied on the surface of the mucous membrane covering, and more easily by introduction of bacteria into the crypts, where the mucous lining is less of a barrier on account of its thinness.

Bacteria can pass through the covering of the tonsil, more easily in case of the degenerate tonsil, into the lymphatic channels beyond, without marked reaction on the part of the organ.

Dr. Jonathan Wright says: "From various clinical facts, it seems likely it is the small, sunken, ragged tonsil, and not the large tonsil, which lets through the dangerous germs."

The principal pathogenic bacteria present on the surface of the mucous membrane and in the crypts of the diseased tonsils which have given symptoms are streptococci, staphylococci, pneumococci, diphtheria bacilli, influenza bacilli, Vincent's fusiform bacilli and the micrococcus catarrhalis. A series of bacteriologic examinations made, on request, by Dr. Simonds at the State Laboratory, shows that the number and variety of bacteria in cultures taken from the interior of diseased tonsils are very much greater than those taken from normal throats. The report shows that many pathogenic bacilli may lodge and remain indefinitely in the crypts of a diseased tonsil ready to be absorbed at any time. It also shows that degenerate tonsils which may not have caused any symptoms are not only a source of infection to the possessor, but also to others.

SYMPTOMS.

A degenerate tonsil is insidious in its origin, sometimes giving no local symptom or indication that it is diseased. The symptoms in a great many cases depend upon the organs affected. The organs or structures affected may be neighboring or remote. The first include nose, throat, teeth, larynx, ear and cervical glands. Of the remote structures the joints, lungs and heart are most commonly affected, while some have accused the degenerate tonsil of contributing to the diseased state of the stomach and even the appendix. Where the infection has invaded the general system, the symptoms of a systemic disturbance are most paramount; these, too, may be vague and obscure in a great many cases.

I have seen cases of nasal disease traceable to degenerate tonsils. Enlarged tonsils interfere with the normal nasal breathing by crowding backward and upward against the posterior pharyngeal wall, obstructing to a greater or less extent the postnasal opening. Moreover, foul secretions forced out from degenerate tonsils, continuously bathing the oropharynx, contaminate the respiratory air and are by no means conducive to a normal nasal condition.

Diseased tonsils may produce a recurrent or constant laryngeal irritation. Such an irritation gives rise to a cough, which soon impairs the function of the vocal cords, as it gives rise to either an acute, subacute or chronic laryngitis. Besides the cough, other symptoms become manifest, such as hoarseness, huskiness and partial loss of voice. In producing a cough, diseased tonsils may be operative either inside or outside of the air passage. The cause operating inside is the direct irritation of the cheesy detritus from the crypts of the tonsils on the mucous membrane of the larynx or cords. The causes operating out-

side of the air passage are indirect, commonly known as reflex, referable to the larynx, due to irritation of nerves, which are in anatomic relation with the pneumogastric nerve.

While I could report a number of cases where a cough or laryngeal irritation was a prominent symptom in cases of diseased or hypertrophied tonsils associated with adenoids, I think it will be of more interest to report a case where the diseased tonsils alone were responsible for a constant laryngeal irritation, the principal symptom of which was a cough.

CASE 1.—Miss W., age 20, was referred to me in October, 1908, because the general practitioner was suspicious that the condition of the tonsils may have had something to do with her constant cough. Past history: For past two winters she had been subject to colds which terminated in a so-called bronchitis that continued throughout the winter. The diagnosis, bronchitis, was made because of the constant cough. Even a change to a mild climate for one winter only moderated the cough. She gave a history of several attacks of tonsillitis. Examination showed medium-sized tonsils adherent to both pillars. Some of the crypts were filled with foul-smelling secretions, some of which were almost calcareous in consistency. On Oct. 11, 1906, the right tonsil was removed by dissection. On Oct. 15, 1906, the left tonsil was removed by dissection. In a very short time the cough disappeared, and now, after a lapse of two winters, it has not recurred. Besides, the young lady has gained in weight and is in much better physical condition.

Diseased tonsils can produce recurrent or constant pharyngeal irritation. In case of the pharynx, besides a recurrent or constant cough, there are also a clearing of the throat, a bad breath, and sometimes a feeling as of a foreign body inside of the throat. The irritation of the mucous membrane is often due to the pent-up, foul-smelling secretions, which have found their way from the crypts of the diseased tonsils out into the throat. The pharynx may also be irritated reflexly through the nerves.

Maken says (*Jour. A. M. A.*, vol. lii, No. 25) that diseased faucial tonsils affect the teeth in three ways: "First, they interfere with the general health of the patient, and thus with the proper nourishment of the teeth. Second, they contribute very largely to the local invasion of the teeth by the numerous bacteria which emanate from their crypts. Third, they interfere by pressure with the alignment of the teeth and with the normal development of the maxillary bones." It may be added that forced mouth breathing, due to diseased and hypertrophied tonsils, may have a detrimental effect on the teeth. That a clean mouth is essential to good

health has become evident, not only in rhinology and laryngology, but also in general medicine.

The caseous and infectious masses discharged from the crypts of degenerate tonsils and retained, especially in the supratonsillar fossa, is one of the chief causes of quinsy or peritonsillar abscess, which is a suppurative inflammation of the tissues surrounding the tonsil.

When a suppurative process develops in the substance of the tonsil, we have an abscess which may be multiple or encysted. Such cases are rare and are more apt to follow an acute lacunar tonsillitis or an acute exacerbation of chronically diseased tonsils. It is the chronic or latent abscess of the tonsil and encysted abscess to which I wish to refer by the recital of the following case:

CASE 2.—Patient, Mrs. B., age 40, referred to me September, 1905. Family history negative. Past history: Two attacks of pneumonia when 16 years of age. Six months before coming to me underwent hysterectomy and ovariectomy for benign growths. Present history: Persistent cough of one year's duration. Cough worse in the evening and at night after retiring. Voice had become thick and husky from cough. On account of loss of sleep, patient lost weight and felt depressed generally. At times felt chilly and feverish and complained of pain in side of neck, especially on deglutition. Was treated during the preceding winter for chronic bronchitis and pulmonary tuberculosis. Examination revealed small, submerged, adherent, but diseased-looking tonsils, also lingual tonsils.

Treatment: The lingual tonsils were first removed, but only a slight improvement of the voice was noticed. In fact, this proved to be only temporary. Several weeks afterward the faucial tonsils were removed by dissection. In the left tonsil, deep down next to the capsule, was found an encysted abscess, which contained about one-half teaspoonful of pus, and which came away on the removal of the tonsil. In a very short time the cough disappeared, and the patient, to my knowledge, has been free from this symptom ever since, with the exception of a slight cough in July, 1909, due to pharyngitis.

Degenerate tonsils offer suitable soil for the bacteria which can set up an attack of follicular or lacunar tonsillitis, diphtheria and various forms of angina. In the latter, the non-diphtherial membrane usually involves the tonsils.

One of the most persistent local affections of the tonsil is mycosis leptothrix, a disease characterized by white projections from the crypts. Here also a degenerate or diseased tonsil predisposes to an attack, as it favors the development of this vegetable parasitic affection.

Enlargement of the cervical glands is not an uncommon complication of degenerate tonsils.

Such tonsils pass the infection along, whether it be simple, tuberculous or syphilitic. The constant or periodic bombardment of the glands by infection from the tonsils finally lowers their vital resistance and produces an enlargement. A simple adenitis once developed becomes a suitable abode for the lodgment and growth of the tubercle bacilli. Tuberculous adenitis is of importance because it is one of the most frequent surgical conditions occurring in children. Surgeons and general practitioners should understand that in about 90 per cent. of tuberculous infection of the glands of the neck the tonsils are the portals of infection. The best argument that cervical lymphatic enlargement is due to a tonsillar infection is the subsidence of this adenitis after the thorough removal of diseased tonsils. Cervical adenitis, especially the tuberculous, is important as an etiologic factor in systemic or pulmonic infection. Wright and Hurd's investigations show that the large free tonsil is much less frequently associated with an enlargement of the lymphatic glands than the small, submerged tonsil. The latter, too, is much more likely to be the soil for invasion of the tonsil with tuberculousis.

Degenerate tonsils may affect the middle ear, producing in some cases deafness, the causes of which are established in several ways: First, deafness may result from improper ventilation of the tympanum through the Eustachian tube. In the second place, it may result from changes in the vascular supply of the middle ear. Again, the inflammation of the tonsils could extend by continuity to the pharynx, adjacent tissues, Eustachian tubes, and even to the tympanum. Cases arising from improper ventilation of the tympanum are not unusual. I have removed tonsillar masses, both projective and submerged, which undoubtedly interfered by pressure with the function of the Eustachian tube. These cases gave symptoms of progressive middle-ear deafness and showed improvement in hearing on removal of tonsils. Even stumps of guillotined tonsils may produce middle-ear deafness, as well as being subject to recurrent attacks of tonsillitis.

CASE 3.—Boy, A. B., age 19. Tonsils bothered patient for five or six years. He was subject to sore throats, the history of which pointed to tonsillitis. On several occasions glands of neck became swollen. His voice had been husky and weak for past three or four years. Much of the time there was present a slight cough, and he had a habit of clearing his throat. For two years he had noticed an impairment of hearing, which became worse the last few months. His ears felt full and dull, and at times there was a crackling

sensation on swallowing. Examination showed very large tonsils, adherent to both anterior and posterior pillars. The openings of the follicles, quite large, showed cheesy detritus. Bacteriologic examination of the contents of these follicles, made by Dr. T. Victor Keene, showed large number of pus cells, great number of staphylococci and encapsulated diplococci, simulating in morphology pneumococci. There was enlargement of the left submaxillary and cervical glands and the cords were congested and dry. On removal of the tonsils and after a few treatments, the hearing became normal, the speaking voice became clear and strong, and the enlargement of the glands subsided.

Diseased tonsils often cause an aurocervical neuralgia, which sometimes is referred to by the patient as an earache, the pain radiating from the ear toward the throat. Such a neuralgia is explained by the anatomic relations of the glossopharyngeal nerve with the nerves of the temporal bone, especially the tympanic branch (Jacobson's nerve) and its connection with other nerves distributed to the ear and neck. When these degenerate tonsils are very large they may exert an outward pressure against the large vessels and nerves of the neck, interfering with the blood circulation in all of the structures of the head and face, and in case of the nerves causing neuralgia.

SYSTEMIC AFFECTIONS.

As portals of entry for infectious material the tonsils may admit to the system not only a toxemia, but a bacteriemia, and even a pyemia. Toxemia, via tonsils, is a more frequent condition than is usually supposed, and its severity depends upon the resistance of the individual and the character of the toxin produced. The recital of a case which shows the degree of a toxemia I have met with may be of interest.

CASE 4.—Young woman, age 24, presented the following symptoms: Slight fever, especially in afternoons, flushed cheeks, general feeling of malaise, loss of appetite, a non-productive cough, huskiness of voice and voice fatigue. She gave a history of three attacks of tonsillitis. General examination, by family physician, of chest, abdomen and blood was negative. Throat examination revealed small, sunken, ragged and adherent tonsils; the crypts filled with foul-smelling, cheesy-looking substance. Treatment: The tonsils were dissected out down to the capsule, and the group of symptoms, constituting a mild toxemia, disappeared.

A case of bacteriemia from tonsillitis was reported in the *Lancet*, Oct. 15, 1904. A male, age 22, suffered with an acute, non-diphtheritic tonsillitis associated with high temperature, 104½ degrees Fahrenheit. There was arthritic

and pulmonary trouble, with delirium lasting fourteen days. The blood contained streptococci. In this case, as in many others reported, the systemic condition followed an acute tonsillitis, a tonsillar infection which is frequently the forerunner of a number of constitutional conditions. Remember, however, that the acute tonsillitis is usually dependent upon a lesion of the tonsil. That is, a degenerate tonsil affords a nidus favorable for setting up an acute local exacerbation, and this in turn is responsible for the general infection.

The part degenerate tonsils play in the etiology of known as well as obscure infections is brought out by Wood and others. Those set forth by Wood are: "Tuberculosis of the lungs with and without tuberculosis of the tonsil, rheumatism, general infection, nephritis, tenosynovitis, endocarditis, bronchitis, pneumonia, pleurisy, appendicitis, jaundice, phlebitis, meningitis, parotitis, skin and eye lesions." This range of diseases might be increased by adding to the list pericarditis, myocarditis, influenza, chorea, neuritis, osteomyelitis and various other streptococcic and staphylococcic septicemias. Osler says: "The tonsils are the usual seat of invasion of scarlet fever and diphtheria, which are associated with a more or less well-marked streptococcal angina." One could fill a volume with case reports of diseases which have been reported as resulting from tonsillar infection.

That there is an intimate connection between acute rheumatism and tonsillitis is the growing opinion of the medical profession. Every one of us has seen cases of acute rheumatism and inflammation of the tonsils closely associated, but whether the rheumatic poison, whatever it may be, enters through the tonsils is still an open question. Although it is not definitely settled that rheumatism is an infection due to a specific coccus, nevertheless the advocates of the tonsillar route theory base their claim on the number of cases of acute rheumatism which follow tonsillitis, also on the marked improvement shown after tonsillectomy.

By referring to the monthly reports issued by the Indiana State Board of Health, one will see, in the order of prevalence of diseases for the years 1907 and 1908, that tonsillitis and rheumatism occupy a conspicuous place during many of the same months:

	1907		1908	
	Tonsillitis.	Rheumatism.	Tonsillitis.	Rheumatism.
April	1	3	3	1
May	4	2	2	1
September ..	2	3	3	1
October	3	4	2	4
November ...	2	4	1	4
December ...	2	4	1	2

Though the records do not show that the cases of tonsillitis were in any way associated with articular rheumatism, the prevalence of both these diseases during the same months of the year seems significant. One authority on the subject thinks that about 25 per cent. of cases of tonsillitis are so associated.

If rheumatism and tonsillitis have an identical cause, it is possible that many of the various rheumatic associations, chorea, endocarditis, etc., are produced by the rheumatic poison or bacterium which has established itself in the system by way of the tonsil. Of these rheumatic associations, acute endocarditis is the most important and serious. That endocarditis may precede an attack of arthritis and not even be associated with it, its usual course being to follow the joint affection, points to the fact that the poison may come through the blood direct from the tonsillar focus.

A case of Dr. Mumford's and one of Dr. Kimberlin's both of Indianapolis, illustrate this. Dr. Mumford treated a child, age 7 years, in May, 1909, for an acute follicular tonsillitis, during which attack there developed an endocarditis associated with a myocarditis without arthritic manifestations.

Dr. Kimberlin's case, that of a little girl 8 years old, gave a past history of tonsillitis, in which there were no rheumatic and cardiac manifestations. After a severe attack of follicular tonsillitis there developed an endocarditis which pursued a chronic course.

That the tonsils may produce the toxins causing chorea is shown in the history of a case Dr. Dorsey treated. A child, age 6 years, was subject to attacks of tonsillitis. During one of these attacks there was associated a typical attack of chorea on the third day.

Aschoff, one of the best known pathologists in Germany, states: "If appendicitis develops after tonsillitis, which clinically there is reason to believe may occur, then the infecting germs probably are transferred to the appendix by way of the intestinal tract and not by way of the blood." Yet some who have observed that appendicitis may follow closely upon the heels of tonsillitis advocate that the appendix may be infected from the tonsil through the blood. The relation of tonsillitis and appendicitis has been discussed in *The Journal* of the A. M. A., May 11, 1907.

The importance of the tonsil as a gateway for infection is again impressed upon us by the number of reported cases of acute nephritis following tonsillitis. This kidney complication is more frequent than is generally known. It behoves

us to be more watchful of the urine in these tonsillar cases, especially in cases with repeated attacks. P. K. Brown, in *The Journal A. M. A.*, June 15, 1907, not only refers to a case of nephritis, but to a case of acute mania, one of septice-mia and one of leucemia, all apparently traceable to diseased tonsils. Hongarde (*N. Y. Medical Journal*, May 12, 1906) reports six cases of acute nephritis associated with hypertrophied tonsils.

Zehle regards the tonsils as the portals of entry for infection of the blood in influenza. In this disease there is a greater local inflammatory reaction on the part of the tonsil, and the cervical glandular involvement is more common.

I do not understand why some still insist that it is good practice to wait for the so-called atrophy of the tonsils, when it is well established that a diseased tonsil is a menace to the general health. The fact that complete extirpation of degenerate tonsils has in a number of cases improved, arrested and cured cases of glandular enlargement, rheumatism, persistent cough, middle-ear deafness and many systemic disturbances, makes it imperative that physicians advise thorough enucleation of the diseased tonsil, not only as a cure for existing conditions, but as a measure of prophylaxis.

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12. Good: Laryngoscope, June, 1909.
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14. Beck: Ann. Otol., Rhinol. and Laryngol., 1909.
15. Goodale: Jour. A. M. A., May 25, 1907.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.

MUNCIE, IND.

(Continued from page 128, Vol. III.)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

MAXWELL, JAMES D., JR.—Bloomington (1850-1891). S. T. 1891, 282.

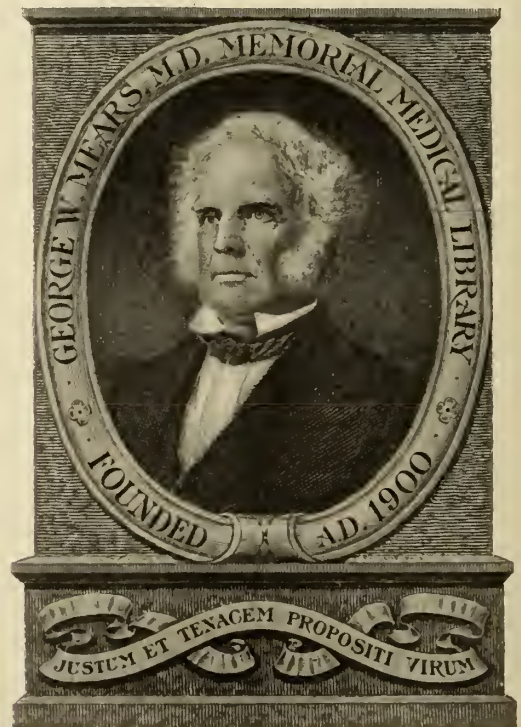
MAY, OLIVER T.—Monroeville (1863-1903). S. T. 1903, 349.

MAY, WILLIS L.—Crawfordsville (1828-1900). S. T. 1901, 492.

MAYER, CARL F.—Fort Wayne (1830-1885). S. T. 1886, 197.

MEARS, GEORGE W.—Indianapolis (1803-1879). S. T. 1880, 234. Dr. Mears was born at Harrisburg, Pa., June 27, 1803. Graduated from Jefferson Medical College in 1827, and same year located at Vincennes, where he remained until 1834, when he removed to Indianapolis. In 1849 he was elected professor of obstetrics and diseases of women in the Central Medical College, which at that time was the medical department of Asbury University. In 1869 he was elected to the same chair in the Indiana Medical College and later became emeritus professor of the same chair, which he retained until his death, May 20, 1879.

Dr. Mears was present at the formation of the state society in 1849. He was faithful in attendance at its meetings and was elected president of the society in 1851. He contributed a number of papers of marked value: "Report on the Duration of Pregnancy" (in connection with Dr. Lomax), Trans. 1851, 31; "President's



DR. G. W. MEARS

Address," 1852, 21; "Placenta Prævia," 1868, 100; "Essay on the Treatment of Puerperal Hemorrhage," 1870, 25; "Biographical Sketch of John S. Bobbs, M.D.," 1871, 211; "Treatment of Puerperal Eclampsia," 1876, 54; and "On the Etiology and Treatment of Unavoidable Hemorrhage," Trans. 1878, 102. See Trans. 1893, 23.

MEEKER, DANIEL.—Laporte (1806-1876). Dr. Meeker was elected president of the State Medical Society in 1856, and presided in 1857. He contributed an article to the society, "Report on Diseases of the Eye," Trans. 1856, 53; "President's Address," Trans. 1857, 57. He also contributed three valuable articles on "Fractures and False Joints," respectively. Transactions, 1857, 29; 1858, 40; and 1859, 34. He was a surgeon of no mean standing. In later life he went off after strange gods, publishing in 1871 a pamphlet of fourteen pages on "Prof. Meeker's Opium Cure—A Cer-

tain and Safe Remedy for the Opium Habit." This pamphlet led to his expulsion from the State Medical Society in 1871—*Trans.* 1871, 230. He was surgeon of the Ninth Reg. Ind. Vols. (three months) and later, for a short time, surgeon of the same in the three years' service.

MEGEE, WILLIAM N.—Rushville (1859-1900). S. T. 1900, 331.

MELSHEIMER, C. T.—Bluffton (1819-1887). S. T. 1888, 205. Was assistant surgeon of the 101st Reg. Ind. Vols.

MENDENHALL, NATHAN.—Thorntown (1831-1880). S. T. 1881, 236.

MENDENHALL, WILLIAM O.—Richmond (1834-1905). S. T. 1906, 504.

MERCER, THOMAS C.—Jeffersonville (1819-1884). S. T. 1884, 222.

METCALF, CHARLES N.—Indianapolis (1846-1896). S. T. 1896, 269. Dr. Metcalf was appointed secretary of the Indiana State Board of Health in 1883, and filled that position until his resignation, May 1, 1896. He was quite a contributor to medical journals.

MILLER, ABRAM O.—Lebanon (1827-1901). S. T. 1901, 493. Quite a number of times the writer has seen Dr. Miller under fire. He was colonel of the Seventy-second Reg. Ind. Vols., and much of the time commanded the famous Wilder's Brigade of Mounted Infantry. He entered the service quite early and remained until the close of the war. At Selma, Ala., he received a dangerous wound, but was not discharged until the war had ended. For his gallant military service he was breveted brigadier general. He was a good man, a good physician, and a patriot. He deserves a shaft as high as Bunker Hill monument.

MILLMAN, JOHN H.—Washington (1845-1881). S. T. 1882, 199.

MINICH, JAMES A.—Worthington (1831-1897). I. M. J., Vol. xv, 341.

MITCHELL, GILES B.—Mooresville (1822-1880). S. T. 1881, 239.

MITCHELL, HARVEY.—Muncie (1825-1909).

MODRICKER, JOHN M.—Wabash (1833-1907). S. T. 1907, 493.

MOFFETT, JOHN.—Rushville (1822-1903). S. T. 1903, 350. After thorough preparation, Dr. Moffett located in Rushville in 1850, where he remained and practiced medicine for fifty-three years. In 1879, at the formation of the Central College of Physicians and Surgeons of Indianapolis, he was elected to the chair of principles of medicine, and at the end of three years was transferred to the chair of obstetrics, which he filled until March, 1887, when he resigned. He was acting president of the Indiana State Medical Society in 1864. He contributed a number of papers to the state society: "Report on the Progress of Medicine," *Trans.* 1862, 47; "President's Address," *Trans.* 1864, 13; "Cerebrospinal Meningitis," *Trans.* 1867, 108; and "General Anasarea—A Case with Remarks," *Trans.* 1869, 15. See I. M. J., Vol. xxi, 530.

MONTGOMERY, DAVID B.—Cynthiana (1834-1885). S. T. 1886, 203.

MOODEY, JOHN W.—Greensburg (1816-1867). Was born in Shippensburg, Pa., June 12, 1816, and died Aug. 27, 1867. He located in Greensburg in 1839, and remained there until his death. He was present at the formation of the State Medical Society, June 6, 1849,

and his name appears often in the Transactions. He was a skilful physician, a good citizen, and a perfect gentleman. He was my generous friend, and I was a student in his office in April, 1861, when the Civil War commenced, and the storm clouds swept me into the conflict.

MOONEY, HENRY C.—Laketown (1850-1905). S. T. 1905, 454.

MOORE, CHARLES V.—Fairmount (1849-1897). S. T. 1897, 359.

MOORE, JOHN B.—Kokomo (1841-1906). S. T. 1907, 486.

MOORE, RICHARD S.—Mt. Vernon (1843-1881). S. T. 1882, 200.

MORGAN, RALPH G.—Indianapolis (1873-1903). S. T. 1903, 351.

MORGAN, ROBERT H.—Spartansburg (1827-1884). S. T. 1884, 220. He was a captain of Company D, Eighth Reg. Ind. Vols., and later first lieutenant of Company D, Fifty-seventh Reg. Ind. Vols.

MORGAN, SAMUEL B.—Crawfordsville (1813-1886). S. T. 1887, 188.

MORGAN, WILLIAM V.—Indianapolis (1853-1900). S. T. 1901, 494. Dr. Morgan first practiced in Indianapolis, then removed to Julietta, and in 1887 returned to Indianapolis. He was appointed professor of anatomy in the Central College of Physicians and Surgeons of Indianapolis. Later he became professor of surgical anatomy, fractures and dislocations, in the same college, resigning his chair in 1899. He was rapidly rising into distinction as a surgeon, when death untimely ended his career. See Stone, 661, and I. M. J., Vol. xix, 164.

MOTHERSHEAD, JOHN L.—Indianapolis (1808-1854). S. T. 1855, 76. He was a charter member of the state society. He was born at Stamping Ground, Scott county, Ky., Jan. 6, 1808, and came to Indianapolis in 1830. He was president of the Board of Health, and during the Black Hawk war was assistant surgeon of the Indiana Battalion. He died at Indianapolis, Nov. 4, 1854.—J. L. Mothershead, a son.

MULLANE, JOSEPH.—Lyons (1856-1898). S. T. 1899, 394.

MULLINIX, M. G.—Spencer (1827-1886). S. T. 1887, 193. Was surgeon of the 149th Reg. Ind. Vols.

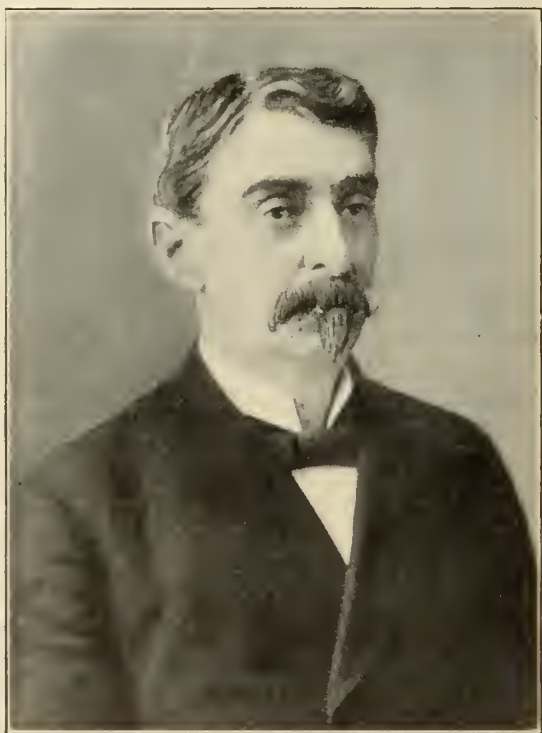
MUNFORD, SAMUEL E.—Princeton (1837-1893). S. T. 1894, 219. He enlisted as a private soldier in the Seventeenth Reg. Ind. Vols. early in 1861; was then appointed hospital steward, and served as such until Aug. 13, 1861, when he was appointed assistant surgeon of the same regiment, and served until Feb. 5, 1862, when he was promoted to surgeon. On the formation of Wilder's Brigade of mounted infantry he was appointed acting brigade surgeon, and served as such until Jan. 12, 1865. He was elected president of the State Medical Society in 1883. To the state society he contributed the following papers: "Case of Hydrocele, with Cartilaginous Thickening of the Tunica Vaginalis," *Trans.* 1872, 7; "Cases of Injury to the Head, with Remarks Thereon," *Trans.* 1883, 110; "President's Address—A Question in State Medicine," *Trans.* 1884, 1; "Repair of Injuries of the Pelvic Floor," *Trans.* 1892, 131. See Robson, 101, Stone, 348, and I. M. J., Vol. xii, 103. For three years I was associated with Dr. Munford in army life, and I loved him as Jonathan loved David.

MURRAY, ALFRED L.—Eaton (1845-1906). S. T. 1907, 479.

MYERS, WILLIAM H.—Fort Wayne (1826-1907). S. T. 1907, 471. Dr. Myers located in Fort Wayne in 1859, and during all his active professional life was recognized as one of the leading surgeons of northern Indiana. In the spring of 1861 he entered the service as surgeon of the Thirtieth Reg. Ind. Vols. and served as such for a number of months. After leaving the service he resumed practice in Fort Wayne. To the state society he contributed a paper on "Shock," Trans. 1883, 138; also "Ganglions, with Suggestions on Treatment," Trans. 1885, 180. Dr. Myers was honored by his professional brethren. I. M. J., Vol. xxv, 332, 449.

NASH, GEORGE W.—Indianapolis (1835-1903). S. T. 1904, 360.

NESBIT, JOSEPH A.—Allisonville (1821-1895). I. M. J., Vol. xiv, 177.



WILLIAM H. MEYERS.

NEW, GEORGE W.—Indianapolis (1819-1891). S. T. 1891, 286. Dr. New graduated at the Ohio Medical College in 1840, and immediately located at Greensburg, where he remained nineteen years, and then removed to Indianapolis. He was surgeon of the Seventh Reg. Ind. Vols. from 1861 to 1864. In November, 1864, was sent by Governor Morton to New Orleans as military agent for Indiana. For two years following the termination of the war he was examiner of drugs in the New Orleans Custom House. Resolutions, I. M. J., Vol. ix, 250.

NEWCOMER, FRISBY S.—Indianapolis (1828-1889). S. T. 1890, 157. Dr. Newcomer was a native of Hagerstown, Maryland, and a graduate of the University of Pennsylvania. He took up microscopy in middle life, and became an expert in that art. During the Civil War Dr. Newcomer was in the government service in Indianapolis, and for six years physician to the Deaf and Dumb Institute. At the time of his death

was contract surgeon to the U. S. arsenal at Indianapolis.

NEWLAND, BENJAMIN.—Bedford (1821-1889). S. T. 1889, 216. Dr. Newland was acting president of the State Medical Society in 1879, Dr. Louis Humphreys having resigned as president, Dr. Newland, vice-president, took his place. At that meeting Dr. Newland delivered an address, "The Relations of Legislation to Sanitary Protection," Trans. 1879, 1. He was a surgeon in the Civil War, Twenty-second Reg. Ind. Vols.

NEWLAND, JAMES H.—Valparaiso (1820-1889). S. T. 1890, 152.

NEWTON, WILLIAM T.—Indianapolis (1854-1900). S. T. 1901, 495. At the time of his death he was filling the chair of materia medica and therapeutics in the Central College of Physicians and Surgeons.

NIERMAN, HERMAN G.—Fort Wayne (1870-1909). Jour. Ind. State Med. Assoc., Vol. 2, 82.

NIMAN, CHARLES H.—Elkhart (1855-1904). S. T. 1905, 455.

NIMAN, JONAS P.—Lagrange (1828-1888). S. T. 1889, 209.

NOBLE, THOMAS B., SR.—Greenwood (1827-1907). I. M. J., Vol. xxv, 410.

NOLAND, STACY T.—Delphi (1845-1887). S. T. 1888, 217.

NORTH, EUGENE B.—Peru (1854-1887). S. T. 1888, 203.

O'CONNOR, JOHN Z.—Elwood (1868-1898). S. T. 1898, 387.

O'FERRALL, ROBERT M.—Lafayette (1826-1896). S. T. 1897, 351. Dr. O'Ferrall was vice-president of the State Medical Society in 1859. For a few months he was surgeon of the Fortieth Reg. Ind. Vols. He was loved and respected by his follow-men. I. M. J., Vol. xv, 295.

O'REAR, CHARLES D.—Jamestown (1839-1884). S. T. 1884, 216.

OLIVER, DANDRIDGE H.—Indianapolis (1826-1895). S. T. 1895, 410. See sketch, I. M. J., Vol. xiii, 386. Portrait, ib. facing p. 371.

OMO, JOSEPH H.—Harlan (1832-1898). S. T. 1899, 396.

OWEN, ABRAHAM M.—Evansville (1849-1898). S. T. 1899, 392. Dr. Owen was one of the leading surgeons of Evansville, occupying the chair of surgery during the existence of the Medical College of Evansville in that institution. See Robson, 533, and Stone, 360.

PALMITER, CLEBRON.—Ligonier (1819-1889). S. T. 1890, 151.

PARKER, JOSEPH.—Colfax (1849-1897). S. T. 1897, 364.

PARR, THOMAS E.—Jolietville (1871-1900). S. T. 1900, 332.

PARRY, CHARLES.—Indianapolis (1814-1861). S. T. 1862, 49. Dr. Parry was born in Philadelphia, and after receiving his medical degree located in Camden, N. J. Upon the advice of his uncle, Hon. O. H. Smith, he came west and located in Connersville, where he remained about two years. Later (1839) he removed to Indianapolis, where he continued to reside until his death. He possessed a high degree of skill as a surgeon and obstetrician. In the July number, Vol. vi, 28, of the Am. Jour. of the Med. Sciences, is an article

from the pen of Dr. Parry entitled "Congestive Fever; Its Character, Symptoms and Treatment, as Met with in Central Indiana." This article was a valuable contribution to the subject of malarial disorders, so common in Indiana, and was quoted by Dr. George B. Wood, Vol. i, 306 (1858), in his great work on the practice of medicine.

Dr. P. H. Jameson says: "Dr. Parry, when quite young, performed a bold and successful operation, by which he relieved a victim of bad surgery of a crook in his leg. He excised a part of the shaft of the bone and brought the limb in line, when the fragments united and the leg was much improved. Professor Mutter, in 1849, referred to this operation as brilliant and successful, but added to the class of Jefferson students whom he addressed: 'Young gentlemen, I cannot advise you to attempt it, as you might not succeed as well as Dr. Parry.'"

See Trans. Ind. State Med. Society, 1862, 49; also, 1894, 212g, and Stone, p. 373.



THEOPHILUS PARVIN.

PARVIN, THEOPHILUS.—Indianapolis (1829-1898). Was born January 9, 1829, at Buenos Ayres, South America, where his parents were residing as missionaries, and died in the city of Philadelphia, Jan. 29, 1898. He took academic honors at the University of Indiana, and in 1852 he received his medical degree at the University of Pennsylvania. He located in Indianapolis as a practitioner of medicine in 1853, and except one year when he resided in Cincinnati, he made Indianapolis his home until the fall of 1883, when he removed to Philadelphia, where he remained until his death.

While a resident of Indianapolis in 1864 he accepted the chair of materia medica in the Medical College of Ohio, and filled that position until 1869. He then held consecutive professorships in the University of Louisville, the College of Physicians and Surgeons of Indianapolis, and the Medical College of Indiana until 1882, when he returned to the University of Louisville, where he remained until 1883, when he was elected to and accepted the chair of obstetrics and diseases of women and children, in the Jefferson Medical College, a position he filled until his death.

Dr. Parvin read eight papers before the Indiana State Medical Society: "Diseases of the Eye and Ear," 1857, 23; "Obituary of Nathan Kneppfer," 1859, 56; "President's Address," 1862, 14; "Vaginal Fistules," 1866, 78; "Report on Diseases of Women," 1868, 90; "Placental Extraction and Placental Expression," 1871, 11; "Fibrous Polypus of the Rectum," 1873, 113; and "Treatment of Placenta Prævia," 1876, 34.

To him belongs the honor of being the first physician of Indiana to write a medical text-book, "Science and Art of Obstetrics." It passed through two or more editions. Although the work did not appear until 1886, yet the book was written while Dr. Parvin was a resident of Indianapolis. On the eve of his departure for Philadelphia he told the author of this paper that he must "dress the work up a little."

He acquired a knowledge of the German language after his fiftieth birthday, and translated into English Winckel's work on "Diseases of Women."

He was honored with the presidency of the Indiana State Medical Society in 1862, and president of the American Medical Association, 1879. Later was president of the Philadelphia Obstetrical Society and the American Academy of Medicine. He received the degree of LL.D. from Hanover College in consideration of his superior professional attainments. He was a personal friend of Sir James Y. Simpson of Edinburgh, and Dr. Wilde of Dublin. He met like cordial recognition from medical men in France.

Dr. Parvin excelled as a lecturer and teacher, while he took high rank as a polished writer. As an operator he was surpassed by many.

Dr. W. B. Fletcher said of him, "He was the purest man I ever knew, and apparently wholly without faults or vices." His last public address in Indiana was on the evening of June 16, 1896, at the thirty-ninth (semi-annual) meeting of the Delaware District Medical Society at Dunkirk. His subject was "Sunshine With-in Attracts Sunshine from Without."

Dr. Parvin established the Western Journal of Medicine, at Indianapolis, in January, 1866. In 1870 he was associated with Dr. David W. Yandell of Louisville in the editorship of the American Practitioner, at the last named city, a position he filled for some years.

After his death his widow presented his library, consisting of over 900 volumes, to the medical department of the Indianapolis City Library.

His remains were brought back to Indianapolis for interment.

Robson, 361; Stone, 375; I. M. J., Vol. ii, 11; xvi, 325; xvii, 143.

PATTEN, JAMES C.—Francisco (1826-1903). S. T., 1903, 352. In 1864 was appointed assistant surgeon of the Fifty-eighth Reg. Ind. Vols., in which capacity he served until the close of the war.

PAYNTER, CHRISTIAN L.—Salem (1824-1893). S. T., 1893, 399. Dr. Paynter served with credit as second lieutenant in Company D, Second Reg. Ind. Vols. in the Mexican War. After his return home he pursued the study of medicine and became a successful practitioner.

PEARMAN, FRANCIS M.—Palestine (1836-1897). He was a native of Indiana. Was assistant surgeon of the Thirtieth Reg. Ind. Vols., and in 1865 surgeon of the residuary battalion of same regiment. Was on the board of examining surgeons for pensions.

PEARSON, CHARLES D.—Indianapolis (1820-1890). S. T., 1890, 165. For seventeen years Dr. Pear-

son practiced medicine in Lawrence county, and for twenty-eight years in Indianapolis. During the Civil War he was surgeon of the Forty-ninth and Eighty-second Regts. Ind. Vols. He was one of the organizers of the Central College of Physicians and Surgeons, and occupied the chair of obstetrics, and subsequently was professor of diseases of the nervous system. He contributed an article to the State Society in 1882 on "Puerperal Eclampsia." Trans. 1882, 126.

PECK, SAMUEL W.—Washington (1817-1895). S. T. 1895, 413.

PENCE, ROLLIN.—Miami county (1813-1899). S. T. 1900, 333.

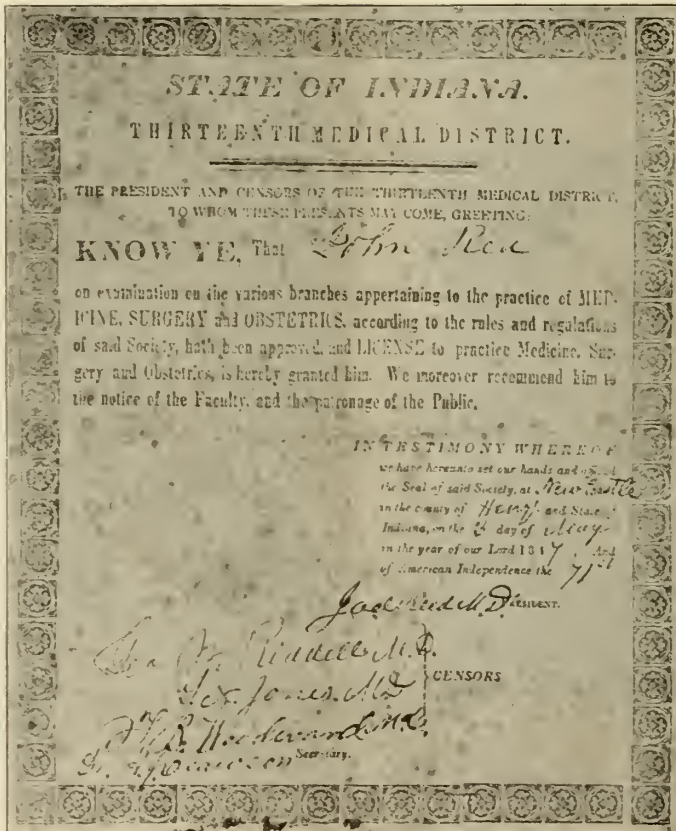
PHIPPS, JOHN M.—Bedford (1849-1899). S. T. 1900, 345.

PITZER, ANDREW B.—Tipton (1845-1895). S. T. 1895, 412. Was a member of the 148th Reg. Ind. Vols. Clerk of Tipton county for four years.

PORTER, ALBERT G.—Lebanon (1825-1893). S. T. 1893, 258. He contributed a paper to the State Society on "Nervous or Sick Headache," Trans. 1889, 99.

Dr. Porter was stricken with cerebral hemorrhage while at the bedside of a woman in labor and died a few weeks later. See I. M. J., Vol. xi, 344.

PORTER, WILLIAM D.—Higginsville (1826-1890). S. T. 1891, 279.



DIPLOMA GRANTED DR. JOHN REA.

PENNINGTON, JOEL.—Milton (1799-1887). S. T. 1887, 199. Dr. Pennington's "President's Address," 1873, was on "Reminiscences of Practice, and Biographical Sketches of Physicians in the Early History of Indiana," Trans. 1873, 9. A portion of this paper has already been published. See JOURNAL, Vol. ii, pp. 102-104. In 1877 he contributed an article on "Hereditary Transmission of Disease," Trans. 1877, 113.

PEPPER, WILLIAM J.—Connorsville (1830-1892). S. T. 1893, 249.

PETTIJOHN, AMOS.—Areadia (1815-1886). S. T. 1887, 192.

PHILLIPS, CHARLES W.—Jennings county (1859-1901). Removed to Colorado in 1898. Died at Rocky Ford, in that state, Sept. 25, 1901.

PHILLIPS, R. N.—Union, Pike county (1822-1885). S. T. 1886, 198.

POSEY, JOHN W.—Petersburg (1801-1884). S. T. 1886, 196.

POUCHER, CHARLES H. C.—Indianapolis (1868-1901). S. T. 1901, 496.

PRESTON, ALBERT G.—Greencastle (1813-1889). S. T. 1890, 153. Dr. Preston located in Greencastle in 1844, and remained there until his death. He was surgeon of the Fifty-fifth Reg. Ind. Vols. He also visited a number of battle-fields at the request of Governor Morton.

Dr. Preston reported an interesting case, "The Report of a Case of Complete Transverse Rupture of Vagina at Its Junction with the Uterus, in Which no Hemorrhage Occurred after That Organ Was Expelled from the Body," Trans. 1882, 21. Also, "A Case of Arsenical Poisoning," Trans. 1880, 47.

PRESTON, SAMUEL C.—Greencastle (1846-1893). S. T. 1893, 253.

PRIGG, EDWARD C.—Henry county (1826-1908). J. I. S. M. A., Vol. i, 205.

PROEGLER, CARL.—Ft. Wayne (1837-1907). S. T., 1907, 472. Dr. Proegler received his medical education in Germany, located in New York in 1860, and at the beginning of the Civil War was made surgeon of the Twenty-fifth Reg. New York Vols. He located in Ft. Wayne in 1874, where he remained until his death.

PUGH, JOHN W.—Upland (1827-1896). S. T. 1897, 347.

PUGH, MAHLON.—Upland (1835-1883). S. T. 1884, 214.

PUGH, WILLIAM A.—Rushville (1829-1893). S. T. 1895, 398. He was a practitioner of forty-two years' experience.

PURVIANCE, SAMUEL W.—Crawfordsville (1823-1891). S. T. 1892, 283.

RAINEY, HARVEY W.—Indianapolis (1854-1902). S. T. 1903, 353.

RANSBURG, MARTIN V.—Steuben county (1842-1900). S. T. 1900, 334.

REA, GEORGE N.—New Castle (1852-1885). S. T. 1885, 219.

REA, JOHN.—New Castle (1819-1899). S. T. 1899, 405. Dr. Rea practiced medicine in Henry county half a century, and no citizen of the county was held in higher esteem. In 1860 he made a "Report from the New Castle Medical Society" to the State Society, Trans. 1860, 58.

READ, EZRA.—Terre Haute (1811-1877). Dr. Read was born on a farm near Urbana, Ohio, 1811, and died in Terre Haute, May 10, 1877, of carcinoma of the stomach. He was graduated from the Athens University, Ohio, and then from the Medical College of Ohio in 1835. He practiced in Cincinnati for a short time and then left for Texas. He participated in the Texas-Mexican War and was made Surgeon-in-Chief of the Texan army and also of the navy. In the history of the United States the little Texas navy is absolutely unique, and few people now know anything about its existence. Dr. Read located in Paris, Ill., in 1840, and came to Terre Haute in 1844. At this time he found an active Vigo County Medical Society and took an active part in its affairs. During the Civil War he was surgeon for the Twenty-first Indiana Artillery, and later surgeon of the Eleventh Reg. Ind. Cav. He was president of the Vigo County Medical Society for two years, 1874-76. He was postmaster in Terre Haute under President Johnson. He was a great lover of books and accumulated quite a library, especially of the classics. He read Latin, Greek and French with facility and could quote endlessly in the original from Virgil, Horace and Homer. He stood high in the profession and was a great friend of the poor. The flags of the city were at half-mast at his death, and the whole community united at the funeral in honoring one who had done so much for them.—Drs. Charles N. Combs and Stephen J. Young, Terre Haute.

REASONER, WILLIAM M.—Sulphur Springs (1828-1887). S. T. 1888, 202.

REEVES, URIAH G.—Clifty (1820-1882). S. T. 1883, 266.

REILEY, WILLIAM F.—Sardinia (1828-1895). S. T., 1896, 259.

RENNER, JOHN G. E.—Indianapolis (1850-1878). S. T. 1880, 238. Dr. Renner was born in Germany,

came to America late in the sixties, graduated from the University of Louisville in 1877, and immediately began the practice of medicine in Indianapolis. "On the 27th of August, 1878, he announced his conviction that his path of duty would lead him to the succor of the victims of yellow fever at Memphis, Tenn., and, despite all the remonstrances of friends, the evening of August 29 found him domiciled in Memphis and ready with his share of help for the afflicted. He remained engaged in this self-imposed duty, rendering all the aid that stricken humanity could have expected from one man until September 11, when the relief-extending hand was itself paralyzed by the scourge whose ravages it had helped to mitigate, and after five days of torture, on Sept. 16, 1878, his light went out and his life was laid as a sacrifice upon the altar of our common humanity."—Dr. I. A. E. Lyons.



EZRA READ.

RICHARDSON, GEORGE T.—Delphi (1834-1880). S. T. 1881, 238. Dr. Richardson served for a time as a lieutenant in the Civil War. In 1862, and again in 1872, he was elected to the legislature to represent White and Benton counties the first time and Carroll county the second time.

RICHARDSON, NEMEMAH.—Vevion (1824-1899). S. T. 1900, 335.

RICHMOND, JOHN L.—Indianapolis (1785-1855). Born in Massachusetts, April 5, 1785, and died at Covington, Indiana, in October, 1855. First practiced medicine at Newtown, Ohio, where he performed a Cesarean operation, April 23, 1827. Possibly this was the first recorded case of Cesarean operation in the United States. He saved the mother but lost the child. See Western Jour. Med. and Physical Sciences, Vol. iii,

485 (1830). See same case, with comments, by G. W. H. Kemper, *Indianapolis Med. Jour.*, Vol. xii, 376. Is mentioned in Churchill's *Midwifery* (1857), 363, but the author erroneously states that the child was saved.

In the early 30's Dr. Richmond removed to Pendleton, Indiana, where he assumed the pastorate of a Baptist church and practiced medicine. After a few years he removed to Indianapolis and formed a partnership with Dr. G. W. Mears. In 1842 he was stricken with paralysis, when he abandoned practice and removed to Covington, where he died and was buried. Some years later his body and also that of his wife were reinterred at Lafayette, Ind. See Dr. W. H. Wishard's paper, *Trans.* 1893, 24, and also in *I. M. J.*, Vol. xi, 199 (January, 1893). Also see interesting letter by Dr. W. N. Wishard, *I. M. J.*, Vol. xxvii, 112 (September, 1908).

RINGO, JAMES L.—Elwood (1866-1901). *S. T.* 1902, 422.

ROGERS, JOSEPH H. D.—Madison (1805-1885). Was born near Lexington, Ky., in 1805. He graduated in medicine at the Transylvania University. He was a colonel in the Texan rebellion, and about 1840, permanently settled in Madison, where he established a large practice up to the time of his retirement from active practice about 1875. He was a man of large physique and strong personality, and enjoyed a rather widespread reputation as a surgeon in southern Indiana and northern Kentucky. He died at Madison in 1885. (From a letter of Dr. Clarke Rogers, Logansport, a grandson.) Dr. Rogers was present at the organization of the State Medical Society in 1849. He was the father of the late Dr. Joseph G. Rogers.

ROGERS, JOSEPH G. (1841-1908). Dr. Rogers was a native of Indiana, and all his medical services were given to the afflicted of his native state. The mention of his name calls up a vision of a Hospital for the Insane. He graduated in medicine in 1864, and was immediately commissioned as an acting assistant surgeon, United States army, on duty at Madison, Ind. This position he filled until the close of the war. In 1875-76 he was Professor of Materia Medica and Therapeutics in the Indiana College of Physicians and Surgeons. From 1879 to 1883 he was superintendent of the Indiana Hospital for Insane at Indianapolis. He was Medical Engineer on the Board of Commissioners for Additional Hospitals for Insane from its organization in 1883 up to the completion of the new hospitals in 1888; at the same time he was Superintendent of Construction for the Northern Hospital (Longcliff), and on its completion was appointed Medical Superintendent, a position he held continuously until the date of his death.

Dr. Rogers was the first to make a quantitative chemical examination of the waters of Orange county, and suggested the name, "Pluto's Well." He devised a method for preventing the incrustations in boilers which became commercially successful.

He contributed a number of valuable articles on subjects relating to the insane. In the *Indiana Medical Journal* for October, 1901, is a thoughtful article from his pen entitled "Cold as a Cure for Tetanus."

Various other articles on a diversity of subjects have been contributed by Dr. Rogers. Dr. Robert Hessler of

Logansport has given (*The Journal of the Indian State Medical Association*, May, 1908, 205) a valuable epitome of the life and professional work of Dr. Rogers, from which I have largely extracted this sketch, and to which the reader is referred for fuller information. Also to Stone, 428. Also a tribute "In Memoriam," by Dr. Samuel E. Smith, *I. M. J.*, Vol. xxvi, 450.

ROOKER, JAMES I.—Castleton (1833-1896). Dr. Rooker was assistant surgeon of the Eleventh Reg. Ind. Vols. from 1861 to 1863. From 1875 to 1879 he lectured on physical diagnosis at the College of Physicians and Surgeons. He was one of the founders of the Central College of Physicians and Surgeons in 1879, and again lectured on physical diagnosis. His papers before the State Society were on "Camp Diarrhea," *Trans.* 1864, 33; "A Few Thoughts on How to Obtain Practice," 1873, 95; "The Indiscriminate Use of Hypodermic Medication," 1877, 89; "The Medical Properties of *Fraxinus Americana*," 1886, 48; and "Thirty-three Years a Country Doctor," 1889, 121. For biography see *I. M. J.*, Vol. xiv, 444. Stone (with portrait), 428.

ROSE, MADISON H.—Thorntown (1832-1904). *S. T.* 1905, 456. Dr. Rose graduated from the medical department of the University of Buffalo in 1861. He was surgeon of the Fifty-third Reg. Ind. Vols. from March, 1863, to April, 1865.

(To be continued)

LEAD POISONING; REPORT OF A CASE.

E. M. HOOVER, M.D.

ELKHART, IND.

On the afternoon of October 29 I was called to see a farmer lad of 14 years, sick in bed, with the following symptoms: temperature, 102 degrees, pulse 120, and respirations 28 per minute. He complained of dizziness, a frontal headache, pain and stiffness in his neck, colicky pain in the abdomen, and a numbness and tingling in the left arm. He was very restless, frequently turning from side to side. He had first mentioned his indisposition on the evening of October 27, but said that he had had the dizziness and pains in the head, neck and abdomen during the two or three days previous. He had had no bowel movement from October 24 to 28, when a movement was secured by rectal enema. His temperature on the evening of October 27 was 101 degrees; the morning and the evening temperature on the following day were 100 degrees and 102.5 degrees, respectively; on October 29 the morning temperature was 101 degrees. His appetite had not been deranged greatly, but the tongue was coated heavily and his breath foul.

At the time of my first visit the father expressed some anxiety on account of the symptoms in the arm. He feared it might prove to be a case of infantile paralysis, of which there are a number of cases in the vicinity of Elkhart. He was told that his suspicions were not unfounded, but that typhoid fever must also be thought of.

I did not see the patient on October 30, but was informed that by evening of that day his temperature had declined to normal. The left arm was weaker and the patient was not able to get up alone. The next day I saw the patient and found his left arm paralyzed to the elbow and the extensor muscles of the forearm partially affected. The pains in the abdomen had subsided somewhat, but the stiffness in the neck had increased. His temperature was normal, the pulse 100, and respirations 28 per minute. He complained of having difficulty in swallowing and of being unable to cough. Respiration was characterized by a very short expiration, the ratio of inspiration to expiration being about 3 to 2. By November 1 the motor paralysis had involved his entire left arm, with the exception that a slight motion was possible in the fingers. The right arm was also partially paralyzed. There were periods of great restlessness, especially at night. When raised to a sitting position, he complained of pain in the outer anterior aspect of the right thigh. November 2 saw no change in the patient's condition from the previous day, excepting that the left arm was weaker and that there was a tendency to opisthotonos. The pupillary reactions were normal, but Trousseau's sign was present and there were marked tremors of the tongue when extended. The muscles of the left arm reacted weakly to the faradic current, but the reaction time was very slow. The right arm reacted stronger and more quickly. I believed the case to be one of acute anterior poliomyelitis, although somewhat atypical.

At this point in my narration I received from a brother physician the suggestion that the case might be one of lead poisoning, he having knowledge of similar cases thought to be due to a solution of some lead salt used in spraying fruit trees. I began an investigation which disclosed the fact that my patient had for three months daily been eating fruit from trees sprayed with a solution of lead arsenate (1.5 pounds to fifty gallons of water). He had helped in applying the spray to the trees about June 10; some time later he had assisted, on two different occasions, to spray the potatoes. At every instance he had operated the handle of the sprayer. On November 3 I noticed, for the first time, that the skin

over the affected limbs was very hot, while the temperature under the tongue was subnormal (97.6 degrees). The left hand had regained some motion, the pain in the abdomen had subsided, the patient was able to cough, and swallowing was less difficult. By November 5 Trousseau's sign had disappeared, the pain he had experienced in his left arm on passive motion had almost subsided, and some improvement was noticed in both arms. The neck was less stiff and there was no pain in the right lower limb when he sat up in bed. On November 6 a report was received from the department of pathology of Indiana University stating that the patient's urine had given a positive reaction for lead.

On November 25 the patient was able to walk a few steps, but he could not rise from a sitting position without assistance. On this day he went to the table for the first time since becoming ill and was able to feed himself with his right hand by using the forearm as a lever over the edge of the table as a fulcrum.

Since that time there has been great improvement. At present, Feb. 21, 1910, his right arm has gained in strength so that he is able to help himself generally. He combs and washes himself, and with a little assistance is able to dress and undress. In his left upper limb he has regained, though to a limited degree, such movements as rotation, pronation, supination, and flexion, but is still unable to use that limb to any considerable extent. The adductor and extensor muscles of the right thigh had also been slightly affected, but these have almost completely recovered. There has developed in the spinal region a deformity characterized by an undue prominence of the lower cervical and the upper three dorsal spines, caused, as I believe, by the paralysis of some of the muscles of that region.

The prognosis for complete recovery is favorable, but the reparative process may take a long time.

MELENA NEONATORUM. WITH A REPORT OF TWO CASES.

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Melena, or a discharge of altered blood from the stomach and bowels, particularly the latter, has been known for a long time, but, so far as I am able to ascertain from the literature at my disposal, it is only comparatively recently that the occurrence of this condition in the new-born has been recognized and reported.

Hooper, in his "*Lexicon Medicum*" (4th American Edition, 1832), defines the word as "the black vomit—the black disease," and seems to associate it with yellow fever. He says: "The malaria which produces intermittent, remittent and other fevers occasionally becomes so powerful, or produces such a corrupted or infected state of the atmosphere, as to induce black vomiting and yellow fevers, as was long since noticed by Hippocrates." He makes no mention of such a condition in the new-born, nor do Maygrier (1833) nor Blundel (1834) in their text-books on midwifery, nor Eberle in his work "On Children" (1834) nor Hunter in his treatise "On the Blood" (1840); neither is it spoken of by Allchin in his article on melena in "Quain's Dictionary of Medicine" (1885). Such files of old medical journals (from 1835 to 1845) as my library contains show no reference to the subject. In fact, so far as I am able to discover, the literature is very scant up to the last five or ten years, since when a good deal of attention has been given to the matter. The best text-book description I have found is in Holt.¹

The cause of the malady is still in doubt. Lop² voices the opinion that most cases of true melena are of syphilitic origin, but the consensus of opinion seems to be against this view and in favor of some form of infection as the cause, though most observers admit the possibility of syphilitic origin in some cases. The idea that this infection may be from any of the pus cocci or the colon bacillus is quite widely received.

Kilham and Marcelis found in these cases an organism resembling the pneumococcus which they believed to be specific; and Gaertner³ isolated a short bacillus, resembling the colon bacillus, which produced gastro-intestinal hemorrhage when injected into puppies, and could be isolated from the blood of these animals. However, the specificity of these organisms is not established.

In some of the earlier communications it was suggested that this affection might be a manifestation of hemophilia, but this idea is no longer held widely, owing to the fact that melena neonatorum occurs with about equal frequency in the two sexes, while hemophilia is thirteen times more frequent in boys than in girls. Also in many cases which show signs of hemophilia in later life there was no hemorrhage at the time of birth, and, on the other hand, in most cases of early hemorrhage which recover there is no evidence of hemophilia as they grow older, this tendency appearing to be strictly limited to the first week or ten days of life.

With regard to frequency of occurrence it is rather rare in private practice, occurring about

once in 1,000 or 1,500 births, but it is more common in institutions (from 0.6 to 8.0 per cent), and seems, at times, to run in epidemics, which, however, are entirely apart from puerperal sepsis. Kilham and Marcelis⁴ report an epidemic showing 10 cases in 54 births in a New York maternity, which was promptly checked by isolating the sufferers.

The mortality is very high, being variously stated by different authors as from 50 to 79 per cent. Shukowsky⁵ had a mortality of 62 per cent. in his 29 cases. Machell⁶ lost just 50 per cent. of his 14 cases. In Townsend's series of 709 cases he reports a mortality of 79 per cent. Holt says: "No observer has seen more than one-third of his cases recover."

Most observers agree that the condition is self-limited, and yet no one would neglect to institute treatment which appeared to be appropriate to the case in hand. The forms of treatment recommended are almost as various as the writers on the subject, though nearly all are in favor of the use of the calcium salts, some recommending the chlorid and some (the later writers, as a rule) the lactate, either administered hypodermically or by mouth in doses of $1\frac{1}{2}$ to 2 grains daily of the chlorid or 2 to 5 grains of the lactate. Shukowsky⁵ recommends one-drop doses of tinct. ferri. chlor. in gruel every hour or two, and lavage of the stomach and intestines with cool physiologic salt solution. Hirst⁷ speaks in favor of two-grain doses of gallic acid by mouth and ergotin hypodermically. Lop², as is natural from his view of the etiology, says that all cases should receive antisyphilitic treatment, and so on. All urge the necessity of keeping up nutrition by careful feeding and the use of stimulants and warm applications to the extremities as needed. A number have used the preparations of the suprarenal gland with good effect.

The cases I am about to report illustrate two types of the disease.

CASE 1.—The mother was a short, plump, healthy woman, 29 years old, a primipara, with pelvic measurements about normal. The father was a huge man, 6 ft. 2 in. tall and weighing 275 pounds. The family history for several generations back was good, and I am certain that syphilis was not a factor.

The child, a boy weighing 8 pounds, was born on Oct. 10, 1905, after a long, hard labor, where forceps were used and the head extensively molded. Respiration was established with some difficulty, but proceeded regularly when once started. Considerable chloroform was used during the last three hours of the labor.

The child was put to the breast six or eight hours after birth and nursed regularly; the only

other material which entered his stomach, besides mother's milk, was boiled water.

On the third day he began to pass tarry stools, the third of which excited the nurse's suspicions and I was called. The fourth stool, passed soon after I arrived, was distinctly bloody and quite copious. I diagnosed the condition at once and began giving one-grain doses of gallic acid and one-half grain of stypticin every three hours. The patient continued to pass bloody stools for the next 36 hours, but they grew less frequent and copious and gave place to normal stools on the fifth day. At no time did he refuse the breast and his nutrition and general condition did not suffer seriously. At present he is a perfectly healthy child, though slightly undersized.

CASE 2.—In this case, also, the mother was short and "chunky;" a healthy primipara of 23 years. The father was an average sized laboring man. The family history was not so good as in Case 1, revealing neuroses and cardiac affections on both sides of the family. Neither case had any history of hemophilia or any abnormal bleeding in the family. I have every reason to believe that syphilis may be ruled out here also.

The child, a male, weighing $7\frac{1}{2}$ pounds, was born on Aug. 18, 1908. There was absolutely no amniotic fluid, and the mother exhibited a psychic inertia; the pains were short and ineffective and little influenced by gr. xx of quinin sulph. which were administered. After eight hours of labor, cervical dilatation being complete, I administered a little chloroform, applied forceps as an aid, and delivered the child in about 45 minutes. Respiration began at once, and the child had every appearance of being a healthy infant. He took the breast well after about ten hours, and continued to do so for about 48 hours, when, some time after nursing, he vomited a quantity of such suspicious-looking material that I was sent for, and on inspecting the vomitus I found it to be the typical "coffee-grounds vomit" of slow gastric hemorrhage. While I was still there the child vomited again and passed its first typical tarry stool. It never took the breast again.

I cannot be at all sure what may have been introduced into this child's stomach during my absence, for, while I gave orders for nothing but boiled water, no nurse was on the case, and the "old women" may have given the baby almost anything.

I instituted the same treatment as in the first case, but, as the conditions were worse instead of better after two or three doses, I tried, in succession, adrenalin hydrochlorid (1-1000) in two-drop doses, by mouth and later hypodermically; ergotin in one-third-grain doses by mouth and hypodermically, and sterile gelatin solution per rectum. During all the time I attempted to support the vitality by small doses of brandy and

diluted milk, by mouth at first, and later by rectum. After the first few hours the introduction of even boiled water, warm or cold, into the stomach, was followed by the vomiting of altered blood, and after that all medication and alimentation had to be carried on hypodermically or per rectum. Warmth was continuously applied to the extremities and the child kept as quiet as possible. In spite of all efforts, the discharges continued and became more profuse, and about 24 hours after their onset the child sank and died.

These cases were both quite protracted labors and instrumental deliveries. So far as it is possible to rule out external infections in a country practice, they were excluded, rigid asepsis being observed.

Syphilis can be left out of the discussion in both cases.

The labor was shorter and the instrumental manipulations less extensive in the second case than in the first, and yet the child was much more seriously affected; still, the prolonged and difficult labor may have been a causative factor in both cases.

No conclusions relative to the etiology of this affection, save that of difficult instrumental delivery, are suggested by these observations. The sex question is not touched by so small a number of cases. The mortality was about the average (50 per cent.). The occurrence (twice in a series of 43 cases) was of more than usual frequency, but of slight significance in so short a series. There have been no other cases of the kind in this neighborhood within the last six years. My chief reason for reporting these cases is to add to the material available for study along these lines.

To me these two cases suggest that a robust and untainted ancestry gives a child a valuable start in his physical life; and also that the milder forms of this malady improve under almost any of the suggested treatments, if carried out judiciously and carefully; while the severer forms go on to a fatal termination in spite of the most elaborate measures, performed with the utmost skill and diligence.

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EDITORIALS

LUMBAR PUNCTURE AS A THERAPEUTIC MEASURE IN MENINGITIS.

Most fascinating and apparently practical is the theory of decompression in the treatment of meningitis, especially of the tuberculous variety, as outlined by Hultgen in the March number of the *Am. Jour. of Med. Sciences*. He believes that the therapeutic indication for opening the sacral cistern is just as strong as is that for diagnosis, although the fact has seemed to meet with little support in the minds of internists. Thus, while Koplik, Tchernoff, Dieulafoy and Holt are either opposed to the procedure for other than diagnostic purposes or are only mildly enthusiastic about it, Neisser and Pollack, on the other hand, marvel that internists are so loathe to puncture the spinal arachnoid space when they so promiscuously puncture every other organ or viscus of the body.

Since the most prominent features of meningitis—headache, vomiting, and stasis papillæ—are distinct evidences of increased intracranial pressure, whatever the underlying lesion may be, the indication is for immediate relief by lumbar puncture. Kocher and Cushing both advocate the relief of the intracranial pressure first, to be followed later by causal treatment, thus reducing to a minimum the danger of disastrous, mechanical results from pressure, such as optic neuritis, deafness, oculomotor disturbances, and some psychopathies. The author believes the weight of evidence to be in favor of the mechanical theory of stasis papillæ, as advocated by Horsley, Cushing, Spiller, Allen and others, and believes that all the meningeal symptoms are avoidable by timely decompression, this, of course, predicated on an early diagnosis. Oft repeated and careful blood examinations, especially total and differential leucocyte counts, he has for some time been advocating as shedding much light upon the diagnosis of intracranial hyperpressure. That meningitis, particularly of the tuberculous variety, offers a very grave prognosis, only a few actual recoveries up to the present time having been

reported, is well known, but, inasmuch as pathologists have recognized the post-mortem evidences of healed meningitic lesions, it is more than probable that, with a rational therapy, future reports of full recovery will not be infrequent.

That the early relief of pressure resulting in complete recovery is more than a theory the author supports by the report of four successful cases, three of which occurred in his own practice. The first case was one that was treated as a tonsillitis for the first 36 hours, the diagnosis of meningitis being confirmed on the fifth day by the lumbar withdrawal of 62 c.c. of clear fluid under marked pressure. Although previous to decompression the prognosis for this case of serous meningitis had been bad, yet immediately after the operation the patient began to improve and is now in excellent health. The second case, that of a rather delicate child of 6 years, one of an undetermined meningitis, but probably influenzal, did not improve very rapidly for the first four days following the withdrawal of 45 c.c. of clear spinal fluid, but this was probably due to a complicating pneumonia and a double, purulent otitis media. But after a week the patient, from a semi-comatose condition associated with all the symptoms of a severe meningitis, passed into a stage of recovery which permitted her to sit up, feverless and practically well, and she is now in good health. The third case was likewise probably influenzal in origin, but more acute in its manifestations. After two days of symptoms of severe meningitis, 70 c.c. of a rather opalescent fluid, under considerable pressure, was withdrawn. Recovery after decompression was very rapid and the patient is now in good health. The fourth case is perhaps the most interesting of the group in that what was probably a tuberculous meningitis was completely cured with no other therapeutic measures than two lumbar punctures made to relieve the symptoms of intracranial hyperpressure. The disease was of rather gradual onset, but became progressively aggravated for seven weeks, when upon a diagnosis of tuberculous cerebrospinal meningitis being made, 100 c.c. of slightly cloudy fluid under marked tension was withdrawn. The sediment of this fluid consisted chiefly of lymphocytes, but a markedly positive Pirquet skin reaction was obtained next day. Though improvement was rapid, yet on the seventeenth day the headache and vomiting increased to such an extent that 60 c.c. more of fluid was withdrawn, after which time the patient improved greatly, and is now in apparently perfect health.

The following summary of the author seems worthy of consideration:

"1. The semeiology of meningitic symptoms is identical with that of pressure phenomena."

"2. The infectious toxic or toxic infectious factor in meningitis has been over-rated hitherto, and the mechanical element of this clinical picture has been neglected."

"3. The early diagnosis of meningitis depends mainly upon the recognition of actual or suspected intracranial hyperpressure, the removal of which becomes at once the foremost therapeutic indication."

"4. Decompression by means of lumbar puncture is feasible in the vast majority of cases, because the aqueduct of Sylvius is seldom totally occluded."

"5. The fact that Quinke originated lumbar puncture for the removal of intracranial hyperpressure gains additional value in the light of the recent studies of Harvey Cushing, Spiller, Frazier, Horsley, Bordley, Theodore Kocher and others."

"6. There are several reasons for the enormous mortality of tuberculous meningitis: First, the injury to the brain, due mainly to pressure, causing a degenerative encephalitis; second, the co-existence of advanced tuberculosis elsewhere in the body, usually in the lungs; and third, the occurrence of miliary meningeal tuberculosis, as a terminal infection in such diseases as nephritis, cirrhosis of the liver, etc."

"7. Tuberculosis of the cerebrospinal meninges owes its danger to the excessive pressure upon the medullary centers or the gray matter, not to its infectious character, for, as we all know, tuberculosis elsewhere has a remarkable tendency to self-cure."

It might be mentioned, although not suggested by the author, that possibly the release of the fluid permits of more dilatation of the finer vessels of the meninges which, like the other parts, have been the subjects of hyperpressure, and that this form of hyperemia is as much a factor in the cure of tuberculous meningitis as is the hyperemic rôle now ascribed to the operative cure of tuberculous peritonitis.

THE TWO SIDES OF VIVISECTION.

Under its department headed "Both Sides of Live Questions," the *Ladies' Home Journal* for March takes up the cause of the anti-vivisectionists in an article by Rev. Floyd W. Tompkins, President of the American Anti-Vivisection Society. While much that Dr. Tompkins has said bears some logic and reason, yet other assertions he makes are, from the standpoint of the

progressive medical man, fallacious and should not be passed over in silence.

To begin with, it is, as the author remarks, a difficult matter to strike a medium between the radical anti-vivisectionist who even opposes vaccination, the use of antitoxins and the dissection of frogs in schools by teachers and pupils, and those who merely urge the use of anesthetics and the killing of the animal at the conclusion of the experiment. So, too, on the other hand, there is a wide divergence between the truly scientific men who are willing to observe certain well-defined restrictions and regulations in their animal experimentation, and what the author would picture to us in the form of a wild-eyed, blood-thirsty set of irresponsible students who would delight merely in the cutting-up of live beings. Possibly there are a few such, but they must needs be very few, and the existence of this minute fraction as against the great multitude of honest, conscientious animal experimenters, is no more condemnatory of the class as a whole than the few black-sheep hiding in the church's fold are an excuse for branding all religion as undesirable and demoralizing. The author seems willing to grant that the Gospel of Christ plainly justifies and demands such advance as shall make life easier and happier, and that the true physician is as much a minister as he who faces the altar, and yet he believes that in rendering life more endurable, the ills attending the human body should be relegated to the background to make room for character-building.

The assertion is boldly made by the reverend gentleman that the advance through centuries of civilization has not served to reduce man's mortality, nor to increase his span of life, but not a word does he utter in praise of the splendid work that has been done in the reduction of the mortality and morbidity from the preventable diseases, the saving of babies' lives, the wrecking of homes that has been prevented by the anti-tuberculosis crusade. As a matter of fact, the total mortality rate has been slightly reduced and the average expectancy of life somewhat increased, but the improvement in both would be far greater were it not for the increase in cardiovascular and metabolic disorders that are at the foundation of many more fatalities than formerly because of our more strenuous and luxurious lives.

Who can dispute the wonderful conquests over malaria and typhoid fever, yellow fever and the plague, smallpox and diphtheria but one who is either so grossly ignorant of that upon which he essays to speak as to merit pity, or else willfully false and deceiving. We can but agree with

Collier's Weekly when it intimates that the latter attribute is the one properly belonging to Mr. Coleridge, the English gentleman, who seems purposely to have misinterpreted well-known statistics regarding the triumph of antitoxin in diphtheria. The absolute falsity of Mr. Coleridge's statement that the death-rate from diphtheria has increased since the introduction of antitoxin, is well shown by *Collier's* table taken from the statistics for the Boroughs of Manhattan and the Bronx from 1888 to 1908, which shows that whereas in 1888 the mortality was nearly 60 per cent., in 1908 when antitoxin was administered on the first day, the mortality stood at 1.6 per cent. And Coleridge's detestable declaration that the use of antitoxin is based upon commercial and selfish interests is likewise justly resented. Indeed, *Collier's* speaks most fittingly when it says that "Coleridge, and the anti-experiment crowd in general, promise to take from Ananias any distinction which may still serve to keep his memory green."

Reverting for the moment to Rev. Tompkin's article, one might observe the lack of logical reasoning when he avers that the killing of animals for food and of savage beasts for our own protection are not violations of what he is pleased to term the divinely enunciated law of the sacrifice of the strong for the weak rather than the reverse, but that these things are merely the "support of life by means which God has provided." Is the curing of a sick body by the experimental use of an animal any less worthy than the support of a healthy one by the slaughter of the animal, provided no great suffering to the animal is entailed? And Keen, in his article in defense of vivisection, published in the April number of the *Ladies' Home Journal*, meets with flat denial the assertions of those who charge cruelty to the hand of the true vivisectionist. Indeed, he declares that he never knew kinder men than Carrel, Crile and others who are just now astonishing the world with their results in blood-vessel surgery. That the methods and labors of such men should be called into question by some narrow-minded sophist and the few faddists who constitute his following, seems almost a blight upon human intelligence. And yet laws are being enacted in England and attempted in New York with the view of stamping out all possibility for the wonderful achievements that have characterized the last few decades.

What have these shallow bigots to show in achievement to compare with the conquest of that centuries-old pest of Cuba, yellow fever, the work of Gorgas in the Canal Zone and the part so modestly yet so courageously played by Reed, Lazear

and Carroll? They speak of sacrificing the strong for the weak; how many of them would directly lay down their lives for mankind as did Lazear, when he permitted what he realized to be probably the fatal bite of the germ-carrying mosquito?

It will be noted in the conclusion of Rev. Tompkin's article that he passes over in most meager fashion what he is pleased to term the old *argumentum ad hominem*, viz., whether the guinea-pigs' or monkeys' lives would outweigh that of his own child, referring to it as a strangely trivial question. And if Dr. Bigelow so little appreciated the blessings of vivisection, as Rev. Tompkins would lead us to believe, then more's the pity for Bigelow, for he's less a man than a doctor. In the average, unprejudiced mind, a few such specific examples as cited by Dr. Keen of the serum treatment of cerebrospinal meningitis, diphtheria, the proof of antisepsis by animal experimentation and the consequent boon to midwifery and present-day surgery; all this could but leave in the reasoning, unprejudiced mind no shadow of doubt as to where lie fairness, broadness and humanity.

EDITORIAL NOTES

WILLFUL violation of the ethics of the medical profession deserves censure, and it is a question as to how far medical societies should go in their efforts to stamp out persistent and repeated unethical conduct on the part of its members. Every organization has the legal right to purge itself of objectionable members, and if proof is furnished concerning unethical conduct on the part of any member of a medical society, there can be no moral or legal reason advanced as to why such member should not be suitably punished in accordance with the rules and regulations of the society to which such member belongs. We question the advisability of resorting to suspension or expulsion as a punishment for minor misconduct unless the misconduct is repeated following suitable warnings from the society. Many men do wrong innocently, while others do wrong because they have a blunted sense of honor. In either case it may be possible to avoid enforcing a severe penalty if the society through friendly overtures and cordial advice encourages the erring member to so change his conduct that it will conform to the spirit and letter of the society's rules and regulations.

Just at the present time there is considerable agitation in different parts of the state over the

question of the tendency on the part of some members of the medical profession to be conspicuous in print, and to herald their professional successes through the press with the evident intention of indirectly soliciting patronage. The practice of giving information to newspapers concerning cases for operation or treatment, with the intention of having the name of the attending physician mentioned in connection therewith, should be condemned in no uncertain tones. On the other hand, the newspapers are not to be blamed for their desire to cater to the wishes of the public in furnishing news, and they often make the mistake of misjudging as to what does and what does not constitute news which is of interest to the public. We are under the impression that every sensible newspaper editor will be willing to accede to the wishes of the medical profession in the matter of omission of names of attending physicians in connection with printed reports of cases that are injured, operated or under treatment, provided the medical profession respectfully requests that the names of medical men be omitted. If a doctor says to the editor of a paper "I am perfectly willing to give you any information concerning my cases to which you are rightfully entitled, and which I can give you without a breach of the confidence placed in me by my patient; but under no circumstances is my name to be mentioned in connection with your publication of the information so given," he will have little fear of seeing his name in print and receiving the condemnation of his fellow-practitioners.

As a matter of fact, when a doctor's name is continually appearing in the public press in connection with case reports, it is an entirely safe conclusion that he has made an effort to secure the publicity which he has received. In communities where this practice is prevalent it is well for the local medical society to pass a resolution, endorsed by the members of the society, making a request that editors of papers in the vicinity shall refrain from publishing the names of physicians in connection with case reports, and giving as a reason that the medical fraternity considers it unethical and improper for physicians to secure publicity in that manner, but that the members of the medical profession are willing, as far as is compatible with reason and without a breach of confidence of the patient, to give the newspapers such items as may seem of interest to the public.

Another practice which is reprehensible is that which is included in the rendering of professional services to lodges or corporations for fees that are insignificant as compared to the customary

fees charged individuals for like services. Every physician should, in justice to himself, receive fees that are adequate and in keeping with the services rendered. The fees should always be in keeping with the fees charged by his fellow-practitioners for similar services, no matter where or to whom rendered. It should be considered beneath the dignity of any reputable medical man to compete for professional work, or to reduce fees below the regulation charges for such work in order to secure a contract. The lowering of the standard for one has a tendency to lower the standard of all and if the lodge or the corporation receives for \$1 what the individual who is outside of the lodge or corporation pays \$2, \$5 or even \$10 for, it will not be long before the standard of fees will be so lowered that every physician will be compelled to place himself on a plane with the contract surgeon. There is really no reason why medical men should resort to contract practice unless by contract practice the remuneration is fully in keeping with the customs of the community concerning remuneration for such services when rendered to individuals.

We confess that the problem is a difficult one to solve, and yet it must be solved in the near future or the medical profession as a whole will suffer. In our judgment the matter should be thoroughly discussed in all medical organizations and some effort made to stamp out the practice. These men who are doing contract work at a great reduction from regular fees should be asked to cease the practice, and an effort should be made to secure a favorable result without resort to such drastic action as suspension or expulsion from the society. In the event that the matter is not settled by persuasion, the society is justified in taking more drastic action, even to the extent of expelling the recreant member. There is, however, every reason to expect that a free and frank discussion of these economic and ethical questions will result in a uniformity of action and practice which will maintain harmony among the members of the medical profession and justice to all concerned.

INDIANA, like all other states in the Union, still has a large number of men practicing medicine who ought to be following the plough or doing some other work which requires but little education. When our new medical law went into effect it provided for the future by prohibiting the grossly ignorant from securing license to practice medicine within the confines of Indiana, but it did not and could not stamp out the ignorant medical man who was already here and could

produce evidence to show that he was entitled to continue the practice of medicine. From time to time the standard of medical requirements has been increased so that at the present writing the man who secures a license to practice medicine in Indiana must have, aside from his medical education, a fairly good general education, and on and after 1911 every man who secures license to practice in this state will have to show that he has successfully passed two years of collegiate work. But for many years to come we shall have to tolerate the poorly educated medical man who was legally entitled to practice medicine before we raised the standard.

As an evidence of how ignorant some of the medical men are we herewith reproduce, spelling and all, some of the causes of death as given upon official certificates turned in to the State Board of Health. Aside from the fact that some of the reports exhibit an astonishing amount of medical ignorance, they also indicate a general ignorance which seems to be inexcusable. Among some of the most conspicuous evidences of lack of early education, either medical or otherwise, may be cited the following taken from the death certificates:

Tubercolis from birth.
Nerve Exotsion.
Chronic Mefritis.
Over exursion.
Suaside by shooting himself.
Sitaseites.
Epolepsia.
Tetas pulmonalis.
Eppilepsey.
Cansor of the Brest.
Information of lungs.
Pernishions Aenemia.
Airsyphilis of the face.
Phytysis Laringis.
Bronco-NewMonia.
Chronic Hart Disease.
Diptherit symptoms.
Convulsions—Worims.
Inition.
Pulminry Consumptin.
Organic heart trouble with hurney.
It was an 8 monthis efeoties died from exhaus-
tion.
Canser of stomac.
Still Bearth.
By two mutch drink causing delerumtremons.
Paraloses of hart.
Hoping coug and lung fevor.
Paralases of hart.
Bowell compacion.
Premature still borner.
Tuberealoces.
Albumin Urea.
Angina Oker Ditis, causing heart failure.

To THOSE of us to whom the matter has ever occurred, the following will come as a satisfactory bit of evidence that even better things may be expected to follow. The clipping is from the *Chicago Tribune*, April 3, 1910:

"To Ludwig Heymen, stamp clerk in the Guthrie postoffice, is due the credit of a general order of the department aimed to conserve the public health. The instruction is known as the 'gummed-side-up' order.

"Hereafter when a purchaser of stamps receives the mail passports of Uncle Sam upside down, he cannot justly accuse the clerk of carelessness. On the contrary, he ought to feel grateful toward a benevolent government, which is trying to prevent the dissemination of dangerous germs.

"Six months ago Heymen called McCoy's attention to handing out stamps with the gummed side down so that it seraped the counter. He contended no matter how hard a clerk tried to keep the window ledge clean it still collected all kinds and varieties of germs from the hands of stamp buyers. Then when the writer licks the stamp with his tongue, as most of them do, he licks off the baeilli.

"Postmaster McCoy, while approving of the idea, thought that the department would disapprove of it, but he finally consented to write to the department. A reply came stating that the department had no objection to the continuance, but did not think the time propitious for a general order. A short time afterward, however, the department must have reconsidered the proposition, for a copy of the order has been received at the local postoffice, affecting more than 60,000 stamp clerks, ordering them to place all stamps before the purchaser with the gummed side up."

The next step is a provision for wet sponges or other devices in all postoffices to abolish altogether the unsanitary procedure of licking stamps with the tongue and sealing letters by the same method. We are very enthusiastic about the establishment and enforcement of anti-spitting ordinances, but inconsistently allow our overworked mail clerks to continue handling matter that must of necessity come in contact with the secretion of all sorts of mouths, whenever letters are stamped and sealed in our postoffices. May the good work inaugurated by the postal authorities continue until the department can at least clear itself of any part in carrying contagion, or at any rate minimize the danger to the greatest degree.

THE Tippecanoe County Medical Society asks the cooperation of the medical profession of Indiana in efforts to secure the passage of a law

which will stamp out ophthalmia neonatorum and to give the widest publicity to Credé's method of preventing ophthalmia in the newborn. The circular which has been sent out is as follows:

LAFAYETTE, Ind., March 10, 1910.

Dear Doctor:—Because institutions for the instruction of the blind (which keep accurate data concerning the cause of the blindness of their pupils) report about thirty-five per cent. of their pupils to be blind as the result of Ophthalmia Neonatorum, the Tippecanoe County Medical Society, by its Committee on Ophthalmia Neonatorum, asks the cooperation of the profession, by County and District Society action and otherwise, in a propaganda looking to the abolition of the disease in this state.

We recommend that the widest publicity be given the Credé method, which consists in dropping into each eye of the new-born babe, by the physician, one drop of a 1 per cent. solution of silver nitrate, as soon as possible after the birth of the baby's head and the cleansing thereof.

We recommend the cooperation of all societies to secure from the next Legislature the passage of a law which will stamp out this preventable disease, and save eyes otherwise doomed to destruction.

We recommend that each society appoint a committee on Ophthalmia Neonatorum in order that it may in its own county use its influence with the profession and public in eradicating this disease. We recommend that each county and district society take action, endorsing this propaganda, and that such action be reported to the undersigned committee not later than May 15th, and that the Committee of the American Medical Association on Ophthalmia Neonatorum may be informed as to the progress made in this state as to the above actions. Said committee will report its progress to the next meeting of the American Medical Association, the first week in June.

Fraternally, submitted.

GEORGE F. KEIPER, Chairman.

EARL VAN REED, Pres. Tippecanoe Co. Soc.

W. N. RESER, Sec'y Tippecanoe Co. Society.

PROF. SEVERANCE BURRAGE.

CHAS. H. GODDARD, who has become more or less notorious through his writings concerning the "medical trust," is now asking doctors to subscribe for a certain number of shares of treasury stock of the American Druggists' Syndicate at \$10 per share. Accompanying the letter is a circular giving the reasons why physicians and pharmacists should get a share of the profit which goes to patent-medicine manufacturers and proprietary-medicine establishments. An effort is made to show that pharmacists will be benefited through the opportunity to procure legitimate household remedies which they can offer at a profit to themselves, in place of certain over-priced patent medicines, and to give the physician an opportunity to share equally with druggists in the profits derived from the sale of legitimate products offered by the organization. It is proposed that a committee composed of physicians and pharmacists shall decide as to the preparations that are to be manufactured and sold, it being the policy that no preparations which will

interfere with the physician's practice shall be exploited by the Association.

On the face of it the plan is one which appears to promise considerable profit to the stockholders, but those who carefully study the subject will discern that the scheme is one to promote the sale of proprietary remedies, while incidentally receiving the encouragement of the medical profession, for which a substantial profit is guaranteed. We are under the impression that not many members of the medical profession who have any regard for principle will grasp at the opportunity offered.

THE American Medical Association publishes a number of books and pamphlets which ought to be distributed to the public, and the use of which for that purpose is encouraged by the Association through the offer to furnish copies at cost. Among these books and pamphlets are the following: Propaganda for Reform in Proprietary Medicine, paper cover, 10 cents; Medical Institutes, Consumption Cures, Cancer Cures, one copy of any one of which is 4 cents; in quantity at a material reduction in price. The Boys' Venereal Peril, 4 cents per copy, or \$2.50 for 100 copies; The Great American Fraud, or articles on the nostrum evil and quacks, reprinted from *Collier's Weekly*, 170 pages, with illustrations, 10 cents per copy; in quantity at a reduction in price. The American Medical Association has also issued nine pamphlets on the Defense of Medical Research. Excepting the first pamphlet on Vaccination and Animal Experimentation, which is sold at 8 cents per copy, or 25 copies for \$1.25, the pamphlets are furnished for 4 cents per copy or 25 copies for 50 cents. Of particular interest to the medical profession are the following books which come from the A. M. A. press: New and Nonofficial Remedies, 25 cents per paper covered copy; Reports of the Council on Pharmacy and Chemistry, in paper cover, 25 cents; Reports of the Animal Laboratory, in paper cover, 25 cents, and the Propaganda for Reform in Proprietary Remedies, paper covered, 10 cents.

THE International Stewards' Association have plans under way for the establishment of a Hotel Training School, and in this school will be a department for the teaching of applied dietetics as a postgraduate course for trained nurses. The cost of tuition is to be maintained by a system of scholarships. The subscribers to these scholarships pay to the school the sum of \$100 and have

the privilege of appointing a student who is asked to give a note for a like amount payable a certain number of years after his course is completed so that his scholarship is perpetuated.

For the maintenance of the department of applied dietetics the committee has concluded to solicit the help of the members of the American Medical Association to properly equip and endow this particular department. Members of the medical profession are asked to subscribe \$1 on the understanding that the subscription does not become binding unless the total amount of \$200,000 for the school has been subscribed. The Hotel Training School is to be located at Indianapolis and the department devoted to dietetics will be of especial interest to the medical profession of this state. Subscriptions may be sent to the chairman of the Training School, Eugene Girard, care of the Shredded Wheat Company, Niagara Falls, New York.

THE Allen County (Ind.) Medical Society has appointed a committee to investigate conditions in Fort Wayne in reference to medical fakes, and, strange to say, the committee has actually written to the Postmaster-General, drawing his attention to the advertising matter these gentry are sending through the mails. The Postoffice Department has promised to examine conditions in that city, notoriously one of the most quack-infested communities in the country. The local newspapers are the real offenders, it need scarcely be said, for lending their columns to the scurrilous stuff; and it would be a real pleasure to honest folk everywhere to have these forbidden the use of the mails while carrying the indecent and thieving advertisements.—*The Lancet-Clinic*.

WE NOTE that quite a large number of county medical societies over the United States publish small weekly or monthly bulletins in the form of a four-leaf folder. These bulletins contain a list of the officers and committees, announcement of the next meeting, with program for the same, abstracts of minutes of previous meetings, special notices to members, fee bills, medical news and miscellaneous information. Occasionally a bulletin is received which publishes in advance an abstract of papers to be presented at the coming meeting. Wherever the funds of the society will permit we believe that the publication of such a bulletin is in the best interests of county medical societies.

AUTHORS of original articles in THE JOURNAL often ask us to furnish reprints of some article that has already been printed and the type for which has been distributed. That there may be less misunderstanding concerning this matter we desire to say that all orders for reprints should be placed at the time the proof is corrected, and a yellow order slip accompanies all proof sent to authors. As soon as THE JOURNAL comes from press the type for that number is distributed and thereafter it is not possible to furnish reprints without resetting the article with the attending increased expense.

DR. HOWARD A. KELLY of Baltimore, in the *Sunday School Times* for March 27, 1910, contributes a full-page article on "A Physician's View of Christ's Miracles." Dr. Kelly says: "My whole attitude toward the Bible is that of the simple faith of my grandfathers, and any other side that is a critical means of investigation has never appealed to me in the least."

WE desire to call attention to Secretary Heath's letter in this issue of THE JOURNAL with reference to papers for the Fort Wayne session. Those wishing to present papers should be governed accordingly.

CORRESPONDENCE

CONCERNING THE PROGRAM FOR THE FORT WAYNE SESSION.

To the Members of the Indiana State Medical Association:

By direction of the Committee on Scientific Work for the Fort Wayne session (Drs. M. Drake, Shelbyville, J. C. Sexton, Rushville, and F. C. Heath, Indianapolis) the following announcement relative to the program is made:

No papers will be received later than July 31, 1910, and preference will be given to authors in the order of precedence of their contributions, with due regard to geographical distribution.

In accordance with the action of the House of Delegates last year, no paper will be placed on the program which has not been read before and received the endorsement of the county medical society of which the essayist is a member, and not more than five papers will be accepted for each meeting (half day) of each section.

It is earnestly desired that more papers be sent in by general practitioners and that as many different parts of the state be represented on the program as possible.

F. C. HEATH, Secretary.

ANNOUNCEMENT FROM THE COMMITTEE ON ARRANGEMENTS FOR THE FORT WAYNE SESSION.

To the Members of the Indiana State Medical Association:

Those who desire to reserve hotel accommodations for the coming session of the Indiana State Medical Association to be held in Fort Wayne on Thursday and Friday, September 29 and 30, may do so at the following regular rates: The Anthony (European plan only), \$1.50, without bath; with bath the prices range from \$2 upward. This hotel will be the general headquarters, and in the balcony of the second floor will be located the commercial exhibits and the bureau of registration and general information.

The Wayne, American plan, \$2.50 to \$4; European plan, \$1 to \$2.50.

The Randall, American plan, \$2 to \$2.50; European plan, 75 cents, \$1 and \$1.50.

The Baltes, European plan only, 75 cents and \$1; with bath, \$1.50. This is a stag hotel and is located across the street from the headquarters.

All persons desiring space for commercial exhibits should make application for the same at once. A blue print showing spaces and prices of the same may be obtained by addressing the chairman of the committee.

A. P. BUCHMAN,
Chairman Committee on Arrangements.

DEATHS

DR. J. M. CARVER died at his home in Winchester, March 24, after a short illness of heart trouble.

DR. JOHN B. CROWLEY, aged 84, died at his home in Sullivan, Ind., April 8, after an illness of six weeks.

DR. C. T. WALL died at his home in Washington, Ind., March 28, aged 35, after an illness of only two days' duration.

DR. FRANKLIN B. RICHARDS, for 62 years a practitioner, died at his home in Taylorville, Ind., recently, aged 85.

DR. CLYDE BOTKIN died of double pneumonia at his home in Parker City, Ind., April 7, aged 28, after an illness of only one week's duration.

DR. CHARLES BEATON, aged 74, was found dead in his office at Martinsville, March 11, by a patient who had gone there to consult him. Death was due to heart trouble.

DR. ELISHA ZIMMERLEE, for twenty years a practicing physician of Markle, died March 28 after a long illness with anemia, aged 56. Dr. Zimmerlee was born in Wells County.

DR. THOMAS H. MCCORKLE, aged 65, who was brought to Terre Haute from Alabama, where he had been for his health, died at St. Anthony's Hospital March 22. He was a veteran of the civil war.

DR. C. M. COVERT, one of the oldest and best known practitioners in Deatur County, died at his home in Greensburg March 31. He was a native of Pennsylvania and a graduate of Northwestern Medical College.

DR. JESSE SNOWDEN died at his residence, 917 West Twenty-ninth Street, Indianapolis, March 8. He graduated from the Central College of Physicians and Surgeons in 1883 and has practiced medicine in Indianapolis since then.

DR. J. N. MATTHEWS, of Mason, Ill., died at his home, March 8, of heart failure. He was born in 1852 in Putnam County, Indiana, and was formerly a writer and poet of some note. He was an intimate friend of James Whitcomb Riley.

DR. JOSEPHINE MINER MITCHELL, University of Michigan, 1901; a member of the Tippecanoe County Medical Society, and the Indiana State and American Medical Associations; died at her home in Lafayette, Ind., February 28, from tonsillitis.

DR. W. N. CRONIN, one of the best known physicians of Blackford County, died at his home in Hartford City, March 8, of heart failure, aged 49. His death came as a shock to his relatives and friends, as he was apparently enjoying splendid health up to within a short time of his death.

DR. ANSON HURD, formerly of Oxford, Ind., and later of Findlay, Ohio, died at the latter place Feb. 18, 1910, aged 85 years. For a short time he was an assistant surgeon in the Twentieth Regiment, Indiana Volunteers, and later surgeon of the Fourteenth Regiment, Indiana Volunteers.

DR. H. A. BEYERLE, aged 87, prominently connected with the social and industrial growth of Goshen, died March 24. He was prominent as a writer of prose and poetry and magazines in his day, and was also a contributor to medical journals. He was editor and publisher of the *Goshen Times* for many years.

DR. GRAFTON W. SEATON, aged 64 years, died March 25 at his home, 1123 Oliver Avenue, Indianapolis, after an illness of only a few hours. Dr. Seaton was born at Hall, Ind., in 1846, and came to Indianapolis in 1903. He returned to his home town two years after this, but came back to Indianapolis about a year ago. Dr. Seaton was a veteran of the civil war.

DR. ISAAC W. INLOW died at his home in Blue Ridge on March 7, 1910, of paralysis, aged 70 years. He was a charter member of the Shelby County Medical Society and a member of the Indiana State Medical Association. He had practiced medicine in Blue Ridge continuously for more than 40 years. A son, Dr. Geo. I. Inlow, was associated with him in practice.

DR. JESSE S. REAGAN, of Lebanon, Ind., died Feb. 9, 1910, at his residence on East Main Street. Dr. Reagan was born in Warren County, Ohio, Feb. 15, 1829. He began the study of medicine in 1843 with Dr. Almand Laftin at Old Augusta, Marion County, Indiana, later attending Rush Medical College, Chicago. He

began the practice of medicine at Mechanicsburg, Boone County, in 1852, and continued in practice for 57 years.

NEWS, NOTES AND COMMENTS

DR. W. L. HINES, Warsaw, is now Health Commissioner of Kosciusko County.

DR. D. C. RAMSEY, who moved to Mt. Carmel, Ill., some time ago, has recently returned to Mt. Vernon, Ind.

DR. EDWIN S. KNOX, 1406 Fletcher Avenue, Indianapolis, will be a candidate for coroner of Marion County at the fall election.

DR. THOMAS H. MCCORKLE, Black Hawk, formerly of Terre Haute, is reported to be critically ill in St. Anthony's Hospital in that city.

DR. JAMES D. HILLS, health officer of Lafayette, is a patient in St. Elizabeth's Hospital on account of injury to the eye caused by a hatpin.

DR. H. T. HARTER, of Newtonville, is convalescing after an illness of twenty-five weeks and is now able to sit up the greater part of the day.

CORRECTION.—On page 124 of the March number of *THE JOURNAL*, second column, third line from the top, instead of "1820" should read "1829."

COLONEL E. WITTEY, Terre Haute, an advertising specialist, is said to have been fined \$25 recently for practicing medicine without a license.

THE health board of Warsaw is now composed of the following members: Dr. A. C. McDonald, president; Mr. Logan Williams, Dr. C. C. Dubois, secretary.

C. O. BUIS, a so-called "suggestive therapist," of Princeton, is said to have been found guilty of practicing medicine without a license, March 10, and fined \$25 and costs.

DR. AND MRS. FRANK F. HUTCHINS, of Indianapolis, sailed for Europe April 9 to be absent several months. Dr. Hutchins will attend clinics in Berne, Vienna, Berlin and other cities.

DR. THOMAS A. WAGNER has been elected president of the Mayor's advisory commission for the city of Indianapolis. Dr. E. A. Willis is also a member of the commission.

MR. HENRY RUSSE, who was manager of the Deaconess Hospital, Indianapolis, died March 2. His administration of the hospital affairs has been most successful, and his death is a deep loss to the institution.

AN UNKNOWN donor of Indianapolis has given \$1,000 for the establishment of a permanent colony or institution for the treatment of incipient cases of tuberculosis. Steps are being taken to make the temporary institution on the City Hospital grounds a permanent one.

AN examination for appointment of medical officer in the Indiana National Guard was held at the State House, Indianapolis, April 8. Col. Homer I. Jones is president of the board, and Drs. John W. Sluss, J. J. Boaz, and Frank W. Foxworthy, members of the board.

THE City Board of Health of Indianapolis has passed a resolution to make the competitive examination for appointment at the Indianapolis City Hospital open to applicants of all medical colleges. Heretofore it has been open only to applicants of colleges in Indianapolis.

AT the third annual meeting of the Fiftieth District Medical Society, held in Terre Haute March 3, the following officers were elected: President, Orion E. Maddox, Rockville; vice-president, Daniel B. Miller; secretary, J. Randolph Gillus, Terre Haute, and treasurer, Myron A. Boor, Terre Haute.

DR. JOHN ROSENBERG, who has been Superintendent of the Marion County Asylum for Insane at Julietta for the past two years, resigned April 1. He will engage in professional practice elsewhere. Dr. Benjamin Potter, 2025 Madison Avenue, Indianapolis, has been appointed as Dr. Rosenberg's successor.

DRS. JOHN H. OLIVER and Albert E. Sterne, of Indianapolis, read papers before the annual meeting of the National Educational Association at Indianapolis March 1 to 4. Dr. Oliver's address was on "The Rational Treatment of Deformities of the Feet," and Dr. Sterne spoke on "Wholesome Versus Unwholesome Exercise."

DR. LEON T. LEACH, of Indianapolis, was fined \$25 and costs by the Federal Court for selling a fraudulent cancer cure. This is the same Leach who was interested with his father-in-law, Bye, in the combination oil cure for cancer, and who was denied the use of the United States mails on account of his fraudulent practices.

PLANS have been presented to the City Board of Health, Indianapolis, for a greater city hospital to cost ultimately \$1,000,000. These plans have been approved by the Indianapolis Medical Society, and it is hoped that they will soon be put into execution, as the need of a large hospital is great. Its situation will be on the site of the present hospital.

SINCE the publication of the March number of THE JOURNAL the following articles have been approved by the Council on Pharmacy and Chemistry of the A. M. A.:

Carbosant (Heyden Chemical Works).
Ovarian Substance, Desiccated (Armour & Co.).
Parotid Glands, Desiccated (Armour & Co.).
Spleen, Desiccated (Armour & Co.).
Thymus, Desiccated (Armour & Co.).
Mammary Substance, Desiccated (Armour & Co.).

THE Thirteenth District Medical Society will hold its spring meeting in Goshen on Tuesday, April 26, in the Old Council Chamber in the Interurban Station Building. The program will start at 1 in the afternoon. There will be six papers with an intermission in the middle of the afternoon with punch in the lobby. The papers will be by men elected by their respective county societies to represent them at this meeting. The afternoon session will be followed by a banquet and toasts.

THE Indiana Steel Company formally opened its hospital at Gary March 23. The hospital is admirably located, well built and thoroughly equipped, has accommodations for about 125 patients, and has cost the company about \$2,000,000. A special train from Chicago carried a number of Chicago physicians and other invited guests to be present at the dedication. The hospital will take care of the injured from all the industrial plants of Gary. Dr. Ira Miltimore is in charge of the institution.

THE following is a supplementary list of Indiana delegates to the Pharmacopeial Convention of 1910: Indiana University School of Medicine, Indianapolis, C. Richard Schaefer, John N. Hurty, A. D. Thorburn; alternates, Samuel E. Earp, Charles R. Sowder, A. C. Kimberlin. Indiana Pharmaceutical Association, Fred W. Meissner, Leo Ellet, J. R. Francis; alternates, Wm. H. Rudder, O. L. Hackett; W. O. Gross. University of Notre Dame, School of Pharmacy, James A. Burns; alternates, William Maloney, Louis Kelley.

DR. AND MRS. JOHN M. STUCKY, of Gosport, celebrated the sixtieth anniversary of their marriage at their home March 7. Dr. Stucky, who is 80 years old, is a Kentuckian by birth, and came to Gosport from Louisville in 1848. He was graduated from the University of Louisville Medical School, and has practiced medicine in Gosport for fifty-five years. Dr. Stucky was a member of the Indiana Legislature in 1866. He was assistant surgeon of the Fifty-ninth Indiana Regiment during the civil war, and participated in the battle of Shiloh.

THE regular meeting of the Seventh Conncilor District Medical Society was held in Indianapolis February 22. The following papers were presented: "Feeding in Typhoid," R. B. McAlpin, Greenwood; "Laboratory Diagnostic Methods," Robert H. Egbert, Martinsville; "Surgical Treatment of Simple Goiter," E. D. Clark, Indianapolis; "Surgical Treatment of Graves' Disease," J. R. Eastman, Indianapolis. Dr. L. L. Whitesides, of Franklin, was elected president, and Dr. W. T. Lawson, of Danville, secretary. Time and place of next meeting was left to officers and councilor to decide.

THIS year's session of the Indiana State Medical Association, to be held in Fort Wayne, Thursday and Friday, September 29 and 30, promises

to be one of the largest and best sessions in the history of the Association. Fort Wayne has long been the medical center for northern Indiana, and the medical profession of that city is noted for progressiveness and generous hospitality. The local medical society, through its Committee on Arrangements, has already begun the work of preparing for the visitors, and an unusual effort will be put forth to have the arrangements so perfected that those who attend the annual session of the State Association will have everything needed for their convenience and comfort in carrying out the scientific work as well as making the visit enjoyable from a social point of view.

The general headquarters will be at the new Anthony Hotel, and here in the balcony over the office will be located the bureau for registration and general information. Here also will be the exhibits, and our commercial friends never have had such an ideal place for their displays. The general session will be held in the assembly room on the same floor, and the meetings of the sections will be held at the Elks' Club House, one-half block distant. The visitors will be accorded the social features and privileges of the Elks' Club and the Commercial Club, the principal social clubs of the city. All of the arrangements have not been perfected, but it is expected that social entertainment will be afforded which will prove enjoyable to all, and an especial effort will be made to entertain the ladies.

We wish to call attention to the announcement of the Committee on Arrangements, published in this number of THE JOURNAL, concerning hotel reservations and reservations of space for commercial exhibits.

THE Eighth District Medical Society held its fifth annual meeting at Muncie, Thursday, April 21, 1910, for which a most unique program invitation was issued. It was in folder poster form, and, with its wealth of witty and appropriate quotations, bristled with the enthusiasm so essential to a live society.

The morning session was given over to a symposium on "The Business of Medicine." Luncheon at the First Presbyterian Church by the ladies of the church was followed by a miscellaneous program, which, together with the morning one, was in full as follows: "Our Profits and Our Losses," Clay A. Ball, Muncie; "Our Duty to Ourselves," J. B. Garber, Dunkirk; "Priest and Panper," G. S. Markle, Winchester; "The Socialistic Future of Medicine," Maynard A. Austin, Anderson. *Postprandial*: "The Job of President," Frank G. Keller, Alexandria;

"Better to reign in hell than serve in heaven." "Phthisic," A. C. Kimberlin, Indianapolis; "Learned he was in medicinal lore, for by his side a pouch he wore." "Worms and Their Treatment," Homer Bowles, Muncie; "Let's talk of graves, and worms and epitaphs." A Natural-born Bone-setter," Horace R. Allen, Indianapolis: "I know him a notorious liar, though not a fool or coward." "Bellyache," J. M. Atkinson, Eaton; "A man of pleasure is a man of pains." "Female Complaints," Maurice I. Rosenthal, Fort Wayne: "I have seen the day of wrong through the little hole of discretion." "Sure Cure for Colds," James S. Blair, Lynn; "You tell the doctor that you're ill, and what does he but write a bill?" "Absent Treatment," Frederick R. Charlton, Indianapolis: "You can and you can't, you will and you won't; you'll be damn'd if you do, and damn'd if you don't."

SOCIETY PROCEEDINGS

THE COUNCIL.

The mid-winter meeting of the Council of the Indiana State Medical Association was held at the Claypool Hotel, Indianapolis, on Thursday, Jan. 13, 1910. Meeting called to order by the chairman, W. N. Wishard. On roll call the following responded: W. R. Davidson, Evansville, First District; W. J. Leach, New Albany, Third District; W. H. Stemm, North Vernon, Fourth District; J. H. Weinstein, Terre Haute, Fifth District; D. W. Stevenson, Richmond, Sixth District; W. N. Wishard, Indianapolis, Seventh District; G. W. H. Kemper, Muncie, Eighth District; George Rowland, Covington, Ninth District; Chas. H. McCully, Logansport, Eleventh District; Albert E. Bulson, Jr., Fort Wayne, Twelfth District, and C. A. Daugherty, South Bend, Thirteenth District. T. C. Kennedy and F. C. Heath, president and secretary of the State Association, were also present.

The condensed councilor reports were as follows: Dr. Davidson, councilor for the First District, said that lack of railroads and interurbans to many towns in his district prevents the organization of a district medical society. In many instances long drives have to be made to attend meetings, and in bad weather and over poor roads doctors do not make much effort to attend society meetings. All of the counties in the district have medical societies and all seem to be doing fairly good work. There are few dissensions, and harmony seems to prevail in all of the societies. The post-graduate course as recommended by the A. M. A., has been tried by some county societies, notably Vanderburg, and not found entirely satisfactory.

Dr. Knoefel, councilor for the Second District, sent a notice to the effect that he was unable to be present on account of being confined to a hospital for the treatment of an injury. On motion the secretary of the Council was directed to send Dr. Knoefel a telegram of sympathy, and an earnest wish for his early and complete recovery.

Dr. Leach, councilor for the Third District, reported that with the exception of Washington county his district is well organized, and all of the county societies are doing good work. There is a district society which holds well-attended and profitable meetings.

Dr. Stemm, councilor for the Fourth District, reported that Brown county, having only four doctors, is the only county in his district that has no society, and the Brown county doctors belong to societies in adjoining counties. All of the county societies are well organized and active. They hold regular meetings which are well attended. The district society holds two meetings a year which are also well attended. The societies in the district are giving particular attention to the business side of the practice of medicine, and discussing lodge practice and fee bills, and adopting suitable resolutions pertaining to those questions.

Dr. Weinstein, councilor for the Fifth District, reported his district in good condition. Vermilion county is affiliated with Vigo county, and the Vigo county society holds weekly meetings. The post-graduate course has proved a failure. All of the societies in the district hold regular meetings which are well attended. Contract practice and the regulation of fees has come in for considerable attention.

Dr. Stevenson, councilor for the Sixth District, reported that all of the counties in the district are well organized, and the societies have well attended and profitable meetings. Several of the county societies have refused membership to physicians who do contract practice. An effort has also been made by some counties to regulate fees. The district society is well attended and always has an interesting program.

Dr. Wishard, councilor for the Seventh District, reported his district in good condition with all counties in the district well organized and showing enthusiasm. The district medical society is well attended and the programs are excellent.

Dr. Kemper, councilor for the Eighth District, reported his district in good condition. All of the county societies are having regular meetings and working harmoniously. Some of the societies have attempted to regulate contract practice as also the question of fees. The district society is well attended and always has good programs.

Dr. Rowland, councilor for the Ninth District, reported that the counties in his district all have societies which are active and working harmoniously. The district society is a creditable organization and very generally attended. Dr. McCormack's work seems to have proven very beneficial in building up professional and social interests in the district.

The Tenth District was not represented, and no word was received from the councilor, Dr. B. O. C. Bowell of Laporte, concerning absence.

Dr. McCully, councilor for the Eleventh District, reported that his district is now in better condition than ever before. There are fewer professional quarrels and jealousies, and more interest in medical society work. All of the county societies hold regular meetings and in some of the counties the post-graduate course has proven very beneficial. The district society is also a thriving organization.

Dr. Bulson, councilor for the Twelfth District, reported that with the exception of Whitley county the counties in his district are all well organized and in an active, harmonious condition. All have regular meet-

ings which seem to be better attended than ever before. In Whitley county petty jealousies and quarrels as well as some apathy concerning medical society work seems to prevent the establishment and maintenance of a good county society. Repeated efforts to awaken interest in society work in the county seems to have met with failure. The district society holds two meetings a year which are very well attended and at which excellent programs are the rule. The Fort Wayne Medical Society, the largest in the district, holds weekly meetings, but was forced to abandon the post-graduate course as it was rapidly killing the society. Interest and enthusiasm picked up as soon as the society returned to the old order.

Dr. Daugherty, councilor for the Thirteenth District, reported that two counties in his district have not very active societies. Five counties are doing post-graduate work and seem to find it profitable. In St. Joseph county the interest in the society was not so good during the time the post-graduate course was being tried. With few exceptions the county societies report profitable meetings and a good attendance. The district society holds regular meetings which are well attended and at which excellent programs are presented.

The editor of THE JOURNAL made his annual report, in which he said that the condition of the affairs of THE JOURNAL were improved over what they were at the time of the last annual report. He said that THE JOURNAL during 1909 had been larger than during 1908, the volume having 100 additional pages of pure reading matter, many more illustrations and a better quality of paper used, all at a considerable increase of cost which had been met from the income. The income from advertising was about the same as for the preceding year, but the saving in general expenses had been devoted to enlarging and improving THE JOURNAL. An increase in the size and weight of THE JOURNAL has made a corresponding increase in postage bills. THE JOURNAL continues to assist in the organization work by furnishing sample copies and letters to physicians who should be members of the State Association. THE JOURNAL office is also maintaining and perfecting at considerable time and expense a double card index of all of the physicians of the state.

The financial report of the year is as follows:

DEBIT.	
To cash for printing, including THE JOURNAL, electrotypes, stationery, circulars, postals, index cards, etc.	\$3,193.75
To cash for postage, including mail charges on THE JOURNAL, letters, circulars, sample copies, etc.	439.50
To cash for freight, express and cartage.	102.27
To cash for stenographers and office help.	790.00
To cash for supplies.	64.00
To cash for commissions and salaries to agents. .	223.39
To cash for incidental expenses.	108.30
Honorarium for the editors, to be paid from bills receivable.	680.13
Total.	\$5,601.34

CREDIT.	
By cash from the Association, 75 cents subscription from each of 2,701 members.	\$2,025.75
By cash from advertising, subscriptions and sale of journals.	2,851.06
By bills receivable, not including accounts known to be uncollectable.	724.53
Total.	\$5,601.34

The report of the editor was accepted and approved.

The following resolution was then offered:

Resolved: That the Council of the Indiana State Medical Association, in regular session assembled, does hereby extend to the editors of THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION a vote of confidence and commendation for the excellent work they have done in estab-

lishing and maintaining a medical periodical of which every member of the Indiana State Medical Association should be proud, and that the Council extends a wish and hope that the editors will continue the work, and that THE JOURNAL will always occupy the same high plane it now occupies under their management.

The resolution was unanimously adopted.

Dr. Stevenson said that he thought the county societies of the several districts should know what their councilors are doing, and that a record of visits to the various county societies should be published in THE JOURNAL. Accordingly he made a motion to the effect that each councilor shall make a detailed report, giving the dates when each county society in his district has been visited, the number of physicians present at the meeting on that date and the general interest shown, said report to be published in the number of THE JOURNAL issued just previous to the State Association session. Furthermore, that THE JOURNAL shall at the discretion of the editor publish the names of the members of each local medical society in attendance on the day when the councilor visits the society. Motion was duly seconded and carried.

The treasurer presented his official statement for the fiscal year, which was as follows:

David W. Stevenson, Treasurer, in account with the Indiana State Medical Association:

DEBIT.	
Jan. 23, 1909, to cash on hand.	\$ 37.14
Feb. 2, 1909, to cash from Secretary, dues collected.	1,164.00
March 3, 1909, to cash from Secretary, dues collected.	1,190.00
April 2, 1909, to cash from Secretary, dues collected.	170.00
May 3, 1909, to cash from Secretary, dues collected.	64.00
June 2, 1909, to cash from Secretary, dues collected.	20.00
July 2, 1909, to cash from Secretary, dues collected.	34.00
Aug. 4, 1909, to cash from Secretary, dues collected.	14.00
Sept. 3, 1909, to cash from Secretary, dues collected.	8.00
Oct. 2, 1909, to cash from Secretary, dues collected.	9.00
Nov. 23, 1909, to cash from Secretary, dues collected.	22.00
Dec. 2, 1909, to cash from Secretary, dues collected.	4.00
Jan. 3, 1910, to cash from Secretary, dues collected.	2.00
Total.	\$2,738.14

CREDIT.	
Feb. 2, 1909, by cash to Dr. Brayton, Editing Transactions for 1907.	\$ 100.00
Feb. 8, 1909, by cash to Dr. Hulson, Editing Transactions for 1908.	100.00
Feb. 17, 1909, by cash to C. H. Romey, canvasser for Association.	18.00
March 3, 1909, by cash to THE JOURNAL, subscriptions for 2,354 members.	1,765.50
April 2, 1909, by cash to THE JOURNAL, subscriptions for 170 members.	127.50
May 3, 1909, by cash to THE JOURNAL, subscriptions for 64 members.	48.00
June 2, 1909, by cash to THE JOURNAL, subscriptions for 20 members.	15.00
July 3, 1909, by cash to THE JOURNAL, subscriptions for 34 members.	25.50
July 3, 1909, by cash to W. B. Sprague, canvasser for Association.	27.00
July 3, 1909, by cash to S. H. Addison, canvasser for Association.	27.00
Aug. 4, 1909, by cash to THE JOURNAL, subscriptions for members.	10.50
Sept. 3, 1909, by cash to THE JOURNAL, subscriptions for 8 members.	6.00
Oct. 2, 1909, by cash to THE JOURNAL, subscriptions for 9 members.	6.75
Nov. 4, 1909, by cash to F. C. Heath (one-half honorarium).	150.00
Nov. 4, 1909, by cash to William Whitford, stenographer.	71.55
Nov. 5, 1909, by cash to Sentinel Printing Co. .	42.05
Nov. 6, 1909, by cash to Joseph B. Champion, stenographer.	89.95
Nov. 23, 1909, by cash to THE JOURNAL, subscriptions for 22 members.	16.50

Dec. 2, 1909, by cash to THE JOURNAL, subscriptions for 4 members.....	3.00
Jan. 3, 1910, by cash to THE JOURNAL, subscriptions for 2 members.....	1.50

Total	\$2,643.30
To balance on hand.....	94.84

Grand total	\$2,738.14
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Respectfully submitted,
DAVID W. STEVENSON, Treasurer.

Approved Jan. 13, 1910,
C. A. DAUGHERTY,
G. W. H. KEMPER,
JOSEPH H. WEINSTEIN,
Auditing Committee.

Motion was made and carried that the Council commend the work of the program committee of the State Association in its efforts to limit the number of papers for each annual session, as also to select papers of approved quality for the program, due regard being given to geographical location of the essayist, so that all parts of the state shall be represented.

Following an informal discussion of ways and means for improving the scientific and social conditions in the various county societies, and talks from president Kennedy and Secretary Heath concerning society work, the Council adjourned, to meet in Fort Wayne at the time of the annual session in September, 1910.

Adjourned. ALBERT E. BULSON, JR., Sec.

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of March 1, 1910.)

Society met in regular session in the Assembly Room with twenty-one members present.

Clinical cases. Dr. H. E. Glock reported case on which a tonsillotomy had been made, and later some atropin used in examination of eyes, the child soon after developing severe headaches, followed by paralysis of right side of face and death. After death the attending physician obtained history of the child having fallen on the ice while walking to the home of a friend. She became unconscious for one hour, but afterward walked home. Dr. Glock is of the opinion that there was concussion and laceration of the brain in the lower Rolandic area with rapid abscess formation and death. The parents of the child for some time had the idea that the atropin was responsible for the child's death, but later changed their opinion. No post-mortem was allowed.

Discussion by Dr. Porter, who asked who signed the death certificate. From history of case there was no autopsy, and the attending physician did not know what killed the child, so what did he put on the death certificate? There should have been a post-mortem.

Differential Diagnosis of Renal Calculus was the title of a paper by Dr. J. H. Gilpin. He gave the history of five cases occurring in his practice, drawing the following conclusions: In these five cases there was blood in two. In all but one the pain radiated into the testes and penis. There was anuria in one and frequent urination in four. These cases represented four possibilities, calculus, tabes, Bright's disease, and prostate with symptoms of one condition common to all. This illustrates: (1) That the presence of blood in the urine is not necessary to demonstrate the presence of a calculus, as proven by cases 1 and 2. (2) That the most constant sign is pain in the back running into the testes and penis. (3) That colicky pain in back radiating into the testicles with blood in the urine does not

necessarily mean renal calculi. (4) That all cases with pain in the back which radiates, which have blood in the urine should be radiographed before subjecting the patient to a nephrotomy.

Discussion by Drs. Porter, McOscar, Calvin, G. Van Sweringen, C. E. Barnett, and closed by Dr. Gilpin.

Board of censors reported favorably on application of Dr. J. H. Hosford, and on motion secretary cast ballot of society for Dr. Hosford.

Adjourned. J. C. WALLACE, Sec.

(Meeting of March 8, 1910.)

Society met in regular session at St. Joseph Hospital with twenty members present. Meeting in charge of Drs. Albert E. Bulson, Jr., and M. I. Rosenthal.

DR. BULSON: Case 1.—Boy; congenital ptosis of left eye; operated two weeks ago. Dr. Bulson said diplopia is liable to result after operating these cases of monolateral ptosis. In this case it may be noticed that the upper lid clears the pupil, though the patient is able to close eye. He will have no diplopia because muscles which control eye have not been disturbed. Dr. Bulson described the Motaïs operation, and said that this operation is usually unsuccessful in monocular palsies. The Beard operation was done in this case. A ptosis coming on in an adult may be from syphilis or rheumatism and should be treated accordingly. A congenital ptosis requires operation.

CASE 2.—Eye injury—not in ciliary region—but has extensive cut across cornea, with injury of lens and traumatic iritis. Has no active iridocyclitis at present. In answer to Dr. Porter's inquiry as to whether an iridectomy could be made, Dr. Bulson said the lens was cut and the lens substance thrown into the anterior chamber, with the development of iritis and extensive adhesions. An iridectomy wouldn't help any, because it is impossible to release the iris all the way around and that traumatic catarrh would prevent vision. The most advisable course to pursue is to let the eye alone if it remains quiet, but if it becomes irritated it should be removed.

CASE 3.—An anomalous macular ring. In the macular region of the fundus there is a spot nearly as large as the nerve head, in appearance like a very active single spot of chorioiditis. The same condition is present in the other eye. It is an unusual anomalous macular ring and reflex. Her vision is normal in every particular.

DR. M. I. ROSENTHAL: Case 1 and specimen. Goiter. History of rapid growth, compression symptoms, etc., going with exophthalmic goiter. Specimen shows hemorrhage into same. This probably accounts for rapid growth and enlargement. Was mostly submammary.

CASE 2 and specimen; prostatic stones. Fourteen stones in prostate of man 45 years old giving symptoms of hypertrophied prostate. The case is unusual in that there are so many stones. The stones are calcium carbonate. Man was operated once before for deep urethral stricture and this probably accounts for stones.

Specimen 3. Parovarian cyst, removed one week ago. Cyst was adherent to pelvic wall, and under it was appendix. Was removed through incision $1\frac{1}{4}$ to $1\frac{1}{2}$ inches in length.

Next case presented procedentia. Presented specimen from liver; gall-stones of 18 or 19 years' standing; clean, white, sterile stones. At hepatic implantation had an ulcerated area with growth into liver, and suspected cancer. Removed gall-bladder and part of

liver. Microscopical examination showed inflammatory material and not cancer.

Case report. Woman, aged 66, came to office with marked cholemia; was brown with cachectic look. On examination liver border extended down below umbilicus with a smooth round tumor. Diagnosis, carcinoma, probably of pancreas. Operation disclosed distended gall-bladder with tumor under this which proved to be pancreas. No metastasis. Dr. Rosenthal does not think it wise to take piece of pancreas for microscopic examination. Made cholecystenterostomy to relieve the cholemia. She now reports blood from bowels and palpable growths elsewhere. Reported another similar case seen years ago where a diagnosis of malignancy of head of pancreas was made and a cholecystostomy was made. Patient is alive to-day. In all gall-stones the gall-bladder is painful—in malignant disease is not painful. It is frequently impossible to make differential diagnosis between cancer and inflammatory enlargement of the head of the pancreas, even with open belly.

Dr. Rosenthal brought up question of using oil in belly after operations where there is infection to prevent adhesions. Reported case of ruptured appendix colon infection; removed appendix, released adhesions and smeared sterile vaselin over where adhesions had been.

CASE 2.—Woman with retroverted uterus and firm adhesions. Releasing same left denuded uterus. Smeared area with sterile vaselin—bowels moved easily.

CASE 3.—Appendicitis and pus tubes. Bowels and uterus greased and got unusual amount of drainage. He said mineral oil was freer from bacteria than vegetable oil. Sterile oil in the abdomen prevents adhesions and assists drainage.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of March 15, 1910.)

Society met in regular session in Assembly Room, with twenty-six members present. Minutes of March 1 read and approved.

Clinical cases. Dr. Weaver gave further report on chancre of lip case. Man subsequently showed maculopapular eruption all over trunk.

Properties and Therapeutics of Ergot. Dr. C. C. Kimmel read a paper on this subject. Discussion by Dr. I. W. Ditton.

Dr. Van Buskirk made motion, which was carried, that the secretary be authorized to have by-laws with amendments brought up to date in printed form.

Communication from Tippecanoe County Medical Society recommending that each society appoint a committee on Ophthalmia Neonatorum, and recommending that each county and district society take action endorsing the propaganda was read. Motion made by Dr. Wheelock and carried that such committee be appointed. Dr. Bulson made motion, which was carried, that the action of the Tippecanoe County Medical Society be endorsed by the Allen County Medical Society.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of March 22, 1910.)

Society met in regular session in Assembly Room, with thirty-one members present.

Clinical cases. Dr. Bulson reported a case of mastoiditis following la grippe, with discharge from ear, prostration, tenderness over mastoid and chill. Oper-

ation showed mastoid broken down, with pus. Found thrombosis of sinus.

Discussion of sinus thrombosis by Drs. Porter, Wheelock, McOscar and Havie.

Pregnancy Complicated with Albuminuria and Diabetes Mellitus was the title of a paper by Dr. J. S. Boyers, in which the author said that all patients should be watched throughout gestation and confinement. Treatment to cause of disease; saline cathartics, soft water, medium temperature baths, tonics (Basham's mixture).

Discussion by Drs. Morgan, Porter, Rosenthal and McOscar. Closed by Dr. Boyers.

Adjourned.

J. C. WALLACE, Sec.

CARROLL COUNTY.

The Carroll County Medical Society held the first meeting of the year at Delphi, March 11, at 2 p. m. The new president, Dr. C. E. Angell, read an excellent paper on Colles' fracture. The discussion was opened by Dr. I. N. Cochran. General arrangements were discussed for the District Society which meets in Delphi in May.

Adjourned.

W. R. QUICK, Sec.

KOSCIUSKO COUNTY.

The March meeting was held on the 29th ult. The society endorsed the propaganda of the Tippecanoe County Medical Society looking to the abolition of ophthalmia neonatorum in Indiana.

Dr. J. E. Potter, Milford, read a paper on the subject of the "Management of Potts' and Colles' Fractures." Dr. McDonald, Warsaw, brought out the necessity for being sure that the parts are well reduced, of being sure that they are back in place. He has not reduced a Colles' fracture for ten years without having the patient under ether. Dr. F. J. Young of Milford spoke of the value of putting up the Colles' fracture with an overcorrection.

Dr. McCaskey of Fort Wayne gave an interesting talk along the lines of "Vaccines," and also spoke of the advances along the lines of blood investigation. Among other things he said: "I have seen patients within two weeks of their death from wasting disease with polycythemia and a high index of hemoglobin. Every cubic millimeter of blood had its normal quota of red blood cells, but there was not so much total quantity of blood."

"The vaccine treatment is the one to be preferred under all circumstances where the character of the disease and the condition of the patient will justify it. It is not permissible in diphtheria and tetanus for the simple reason that you do not have time—your patient is being overwhelmed by the toxin. But the vaccine treatment (that is, the introduction into the blood of the bodies of dead bacilli from the infection from which your patient is suffering) would be just as beneficial as the other, except that you have not got the time."

"Hereafter we are to place spinal meningitis with diphtheria and tetanus as a disease which can be robbed of its terrors by the use of antitoxin."

Dr. McCaskey spoke against the use of tuberculin in patients suffering from advanced tuberculosis and having fever.

In speaking of the use of vaccines generally, Dr. McCaskey emphasized the value and the necessity of using everything else which will add to the strength

and comfort of the patient in addition to the use of vaccines. That is, because the vaccines were of value we should not overlook the use of the great aid from medicines, hygiene, surgery, etc., which might be applicable to any particular case in addition to the vaccines.

Dr. J. W. Hefley, Mentone, read a paper on "Erysipelas." In the discussion Dr. Anglin, Warsaw, spoke of the value of a saturated solution of magnesium sulphate. Gauze is laid over the affected part and kept continually moist with this solution. It allays the itching, burning and swelling. It does not irritate the skin or cause pain in itself. Dr. Shackelford, Warsaw, has used antistreptococcal serum in this disease with very satisfactory results. Dr. Hines, Warsaw, finds that fresh buttermilk will ease the pain.

Dr. W. L. Hines, Warsaw, Health Commissioner of Kosciusko county, read a paper on the subject of "The Doctor's Responsibility in Infectious Diseases." At the request of Dr. Hines that the society take some action as to what they would consider a fair charge for disinfecting, the society voted that its members charge the county the regular mileage fee and ten dollars for disinfection.

Adjourned.

C. NORMAN HOWARD, Sec.

MADISON COUNTY.

The regular meeting of the Madison County Medical Society was held in the public library in Anderson, March 22, with fourteen members present. Dr. H. C. Jones read a paper on "Lung Fever." At the request of the society this paper was referred to the committee on papers of the state association.

Adjourned.

ETTA CHARLES, Sec.

SPENCER COUNTY.

The Spencer County Medical Society met in regular session March 15. Minutes of last meeting read and approved. Dr. White reported a case of stricture of internal sphincter with hemorrhage of very foul odor, with several growths about stricture which may be of carcinomatous origin. Dr. DeTar reported a case of ophthalmia which was discussed. Dr. Buxton read an excellent paper on "Tonsillitis." Discussion.

Adjourned.

H. Q. WHITE, Sec.

BOOK REVIEWS

MODERN CLINICAL MEDICINE. Diseases of Children. Edited by Abraham Jacobi, M.D., LL.D. An authorized translation from "Die Deutsche Klinik," under the general editorial supervision of Julius L. Salinger, M.D. With 34 illustrations in the text. D. Appleton & Co., New York and London, 1910.

This volume, an American reproduction of one of a series of volumes published in Germany, contains a number of monographs on related subjects, arranged so as to form a systematic treatise. The list of contributions includes the following essays: "Diseases of the New-born in the First Days of Life," by C. Keller; "The Most Common Infections of the Oral Mucous Membrane in Children," by A. Monti; "Acute Digestive Disturbances of Infancy," by Th. Escherich; "Chronic Digestive Disturbances of Infancy," by B. Bendix; "Infantile Scurvy" (Barlow's Disease), by H. Newman; "Rickets" (Rachitis), by J. Zappert; "Infantile Scrophulosis and Tuberculosis," by H. Finkelstein; "Speech Disturbances of Childhood," by H. Gutzmann; "Functional Nervous Diseases of Infancy," by

H. Neumann; "Convulsions in Children," by H. Hach-singer; "Diseases of the Nose and Pharynx Peculiar to Infancy" (excluding tonsillitis), by J. Zappert; "Meningitis of Infancy and Hydrocephalus," by A. Kohts; "Infantile Spinal and Cerebral Paralysis," by A. Hoffa; "Chorea Minor," by B. Bendix; "Pneumonia of Children and its Treatment," by E. Henoch; "Rötheln, Rubella, German Measles," by Ch. Baumler; "Measles, Morbille, Rubeola," by O. Heubner; "Scarlet Fever, Scarlatina," by O. Heubner; "Diphtheria and Diphtheritic Croup," by A. Baginsky; "Epidemic Parotitis, Mumps," by H. Falkenheim; Pertussis, Whooping-cough, Tussis Convulsiva," by A. Baginsky.

Having been subjected to the rigid criticism and careful editing of one who is pre-eminently a master of the subjects of infantile pathology and therapeutics, this collection of essays is offered to the profession not as a complete text on diseases of children but as a volume treating of those diseases essentially of childhood. The translation is particularly clear, making the book one of inestimable value.

ATLAS AND EPITOME OF OPHTHALMOSCOPY AND OPHTHALMOSCOPIC DIAGNOSIS. By Professor Dr. O. Haab of Zurich. Edited, with additions, by George E. de Schweinitz, M.D., Professor of Ophthalmology, University of Pennsylvania. Second revised edition. W. B. Saunders Company, Philadelphia and London, 1909. \$3.00 net.

ATLAS AND EPITOME OF EXTERNAL DISEASES OF THE EYE. By Prof. Dr. O. Haab, of Zurich. Edited, with additions, by George E. de Schweinitz, M.D., Professor of Ophthalmology, University of Pennsylvania. Third revised edition. W. B. Saunders Company, Philadelphia and London, 1909. \$3.00 net.

Too much cannot be said in praise of Professor Haab's Atlases, which have become classical, and the popularity of which has been attested by the demand for numerous American and European editions. The fact that Dr. de Schweinitz edits the American edition is in itself sufficient testimony of the thoroughness and accuracy with which the translations have been made and the reliability with which the editor's comments may be taken.

The Atlas on External Diseases of the Eye contains 101 colored lithographic illustrations on 46 plates, and these, as is the case with all of the illustrations in the Haab atlases, are particularly lifelike in coloring. The text includes a brief treatise on the pathology and treatment of the external diseases of the eye. Here will be found a very concise yet reasonably comprehensive description of the more important diseases of the eye and mention made of the best therapeutic measures.

In the atlas of ophthalmoscopy there are 152 colored lithographical illustrations which record all of the more important fundus changes, to which many of the microscopical lesions have been added. In the text will be found a full explanation of the methods of ophthalmoscopic examination, and the whole book furnishes a manual of the greatest possible service, not only to the beginner in ophthalmic work, but to one who is already far advanced and desires to compare the observations of his own service with those of the rich clinic from which Dr. Haab has gathered his plates.

As the editor has well said in one of the prefaces, "It is not too much to say that while one is reading these atlases he distinctly feels that he is in the atmosphere of a large clinic. The books will prove in the future, as they have in the past, of the greatest use to those who desire to study and teach ophthalmology."

These last editions have been improved by the addition of some text and several new colored plates.

SURGERY: ITS PRINCIPLES AND PRACTICE. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume V: Octavo of 1,274 pages, with 500 illustrations, 45 in colors. Philadelphia and London: W. B. Saunders Company, 1909. Per volume: Cloth, \$7.00 net; half morocco, \$8.00 net.

The first chapter, which occupies a little more than one-fourth of the volume, treats of the Surgery of the Vascular System Exclusive of Ligation Arteries in Continuity, is written by Rudolph Matas, and is a clear and comprehensive exposition of the subject. Aside from the purely surgical hemorrhages, the author also deals with hemorrhages due to infections and hemophilia. Hypodermoclysis, Enteroclysis and Direct Transfusion of Blood are given elsewhere, the two former in volumes one and three, respectively, and the latter in a later chapter in this volume. The next chapter, which is equal in length to the first, is on Surgery of the Female Genito-Urinary Organs, and is written conjointly by Montgomery, Fisher and Bland. In addition to subjects clearly gynecologic, the authors also include Cesarean Section, Hebosteotomy and the various operations devised and used to overcome obstructions of childbirth. Wisely the authors have avoided using space to discuss the physiology and anatomy of the female genitourinary organs. Neither do they waste space in considering so-called "minor surgical" and "office" methods of treatment.

Dr. John H. Gibbon commences his chapter on Surgical Technic with a concise history of antiseptics and asepsis, then takes up in a methodical way the various branches of the subject. Rather unusual is a terse article on the "Study of the Patient."

The chapter on Ligation of Arteries in Continuity is by W. S. Bickman of New York, who devotes 76 pages to his subject, which is treated in an entirely satisfactory way.

Operations on Bones and Joints is written by Warbasse. We were disappointed in not finding in this chapter any reference to Murphy's splendid work along this line. The chapter on Amputations is also written by Bickman, and like his chapter on Ligation of Arteries, is well written and sufficiently comprehensive for all practical purposes.

John B. Roberts is author of the chapter on Plastic or Reconstructive Surgery, which occupies 33 pages only. The major portion of this space is quite properly given to the consideration of the history of the subject, general principles and methods. Rhinoplasty is the only subject treated specifically.

In putting the subject of the Surgery of Accidents in the hands of Dr. Estes of South Bethlehem, Pa., the editors have given additional evidence of the care they have exercised in the choice of writers for the various departments of the work. For no living man perhaps has had a wider experience in this particular kind of surgery. The chapter fully comes up to expectations. What we have said of the last chapter and its author is equally applicable to that on Surgery of the Parathyroid Bodies, which is written by Charles H. Mayo, whose experience is as great if not greater in this line of work than that of any other man. We are aware that Kocher has operated oftener than has Mayo for

goiter, but our knowledge of the function of the parathyroids dates from 1891, and since that time no man had so wide an experience in goiter work as has C. H. Mayo.

The Intracranial Surgery of the Fifth and Eighth Nerves is written by Charles H. Frazier, and is a splendid presentation of this difficult branch of surgery. There is an addendum to this article by Keen describing Hudson's burrs and forceps for use in making osteoplastic flaps.

Hobart Amory Hare writes the article on General Anesthesia, and it goes without saying that the subject is treated in a splendidly practical way. I am glad to note that scopolamin-morphin anesthesia is not regarded as justifiable or practicable. "A single dose two hours before operation . . . may obtain a definite place in surgical practice."

Carl G. Lennander of Sweden was to have written both the article on Local Anesthesia and that on Spinal Anesthesia, but his death occurred after he had finished the former, and the latter was written by his assistant, F. Zachrisson. That Lennander's task was completed by worthy hands is very evident, for in these two articles we have a sane and scientific discussion of these important questions, and one would be at a loss to say from the articles alone which was written by the master and which by the assistant.

The Surgery of the Infectious Diseases is the title of a chapter by George E. Armstrong of Montreal, in which this rather neglected subject is treated in a systematic and practical way. The surgery of typhoid occupies about half the space. One is rather surprised to find the subject of puerperal eclampsia included in this chapter. In eclampsia with suppression cap-sulotomy is advised.

E. A. Codman of Boston is the author of the chapter on the Uses of the X-Ray and Radium in Surgery. "The accepted facts and general principles with which every student and practitioner of surgery should be familiar," are discussed and technicalities are omitted.

Surgeons generally will be glad to find that this volume contains a chapter on the Legal Relations of the Surgeon. It is written by Hampton L. Carson, Esq., of Philadelphia, and in a clear, terse way answers most of the questions necessary for the surgeon's guidance as a witness and in malpractice cases.

In the chapter on the Laboratory as an Aid to Surgical Technic and Surgical Diagnosis, the author, Dr. W. M. L. Coplin, discusses only those points which surgeons generally want to be familiar with to guide them in their operative technic, and aid them in handling and procuring specimens for laboratory examination and for preservation. The volume closes with a splendid chapter by Dr. A. J. Ochsner on the Surgical Organization of a Hospital. We want here to emphasize what has been said in the reviews of preceding volumes and reiterated in this, viz.: That the editors are to be commended for having chosen, in most instances, men of wide experience and good judgment to write the various chapters in this system. The bibliographical lists in this volume are quite exhaustive.

The publishers' work is good. The illustrations are many, and for the most part very good, though some that are presumably drawn from specimens are rather too wooden and diagrammatic.

Any one knowing the editors of this system—and what surgeon does not know them—would expect a work of extraordinary merit from their hands—and he will not be disappointed.

THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D. Editor and Manager

BEN PERLEY WEAVER, B.S., M.D., Assistant Editor

OFFICE OF PUBLICATION: 219 W. Wayne Street, FORT WAYNE, IND.

VOLUME III

FORT WAYNE, IND., MAY 15, 1910

NUMBER 5

ORIGINAL ARTICLES

ESTIVO-AUTUMNAL MALARIA.*

G. D. MARSHALL, M.D.
KOKOMO.

Malaria is the most widely disseminated of all infectious diseases, and has been known to medicine since the time of Hippocrates, who separated it into a group of fevers, as quotidian, tertian and quartan, from numerous other fevers, as inflammatory and continued fevers.

Various causes of the disease were suggested and had their supporters, but the true cause of the disease was not known until the discovery of the plasmodia by Laveran, a French military surgeon, in November, 1880. The mosquito was not considered the carrier and disseminator of malaria until 1890.

This places the discovery of the cause and carrier of malaria among the recent discoveries in medicine, and it is far from settled as to whether the mosquito is the only carrier of the disease, as reports of epidemics of malaria, where no mosquitoes are known to exist, are made by men whose statements are worthy of consideration.

For the past three years mosquitoes have been abundant in the section where I live. During the summer and fall of 1908 they were such a pest that sleep was impossible, and the city board of health attempted to destroy them by pouring oil on the stream above the city, but as this was not done until about October 1, the only result could be an increase in the revenue of the Standard Oil Company.

Cellars were full of the insects, and great swarms could be seen about the eaves of houses in the evening. Along streams they were very numerous, and could be seen coming from the

openings of sewers in great numbers. They persisted in great numbers until very late in the fall. After most of the leaves had dropped from the trees, swarms of them could be seen to the leeward of the bunches of leaves that remained in the tops of small willow trees, and could be caught in great numbers by using a net with a long handle. Many of them lived all winter in houses and cellars, as I have observed them on several occasions in February.

The question as to whether the mosquito is the only carrier or not, need not enter into the discussion, for while most of them were culex, yet anopheles were always present in a certain proportion.

The difficulty of applying the measures of prophylaxis, as suggested by Dr. Gorgas, and carried out in the Canal Zone, are numerous.

There is a sluggish stream running through Kokomo, the banks and adjacent marshes of which are covered by heavy brush and weeds. Shade trees and buildings afford protection against the wind, and make flight to any part of the city easy. The clearing away of shade trees and buildings would inflict on some a heavy financial loss.

As a very small amount of water is needed to breed great numbers of the insects, it would require a far-reaching effort to exterminate them.

M. L. Howard, in a recent report, estimates the annual death rate from malaria in the United States to be 12,000, to say nothing of the cases of invalidism and incapacity it causes, and says the combined financial losses from Texas cattle fever, boll weevil and hog cholera sink into insignificance when compared with the economical losses caused by malaria.

G. E. Reily, a special pension examiner, told me that about 75 per cent. of the applications for pension made by Spanish war veterans were made for disabilities due to malarial infection received

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 8, 1909.

while in the service, diarrhea and gastro-intestinal trouble with nervous breakdown being the alleged cause of disability, but which was really a chronic malarial manifestation.

I have examined a number of these men and found plasmodia in the blood, and obtained a history of recurring attacks once or twice a year ever since the original infection was received while in service.

Thomas W. Jackson, in his work on tropical medicine says: "During the decades immediately preceding the Spanish war, malarial diseases had so nearly disappeared from many parts of the United States that the average practitioner knew comparatively little from actual observation of its multiform manifestations. It is believed that the importation of tropical malarial disease into the United States during the last seven years alone will supply clinical teachers with material for some time to come."

He also says that there is nothing in the tropic climate *per se* which modifies the expressions of infection with the various hemamebas of malaria. The most virulent and rapidly fatal cause of pernicious malarial fever which he can recall was observed in one of our northern cities, a community practically free from malarial disease, in the person of an American who had never traveled beyond the limits of his state nor outside the temperate zone. In this case the human source of infection was determined with reasonable certainty to a recently imported Italian workman who was employed in the same room with the American in a pottery, under conditions favorable for mosquito biting and inoculation.

In a paper read before this Association in May, 1907, and in a paper appearing in the *Central States Monitor* in March, 1908, I spoke of these means of introducing the infection into our country in areas that had been free from malaria for some years.

Tradition has always conveyed the idea that malaria was a disease marked by distinct paroxysms, and while this is true of infections by the benign parasite, there may be no distinct chill and fever in the estivo-autumnal infection, or this may have occurred some time before the patient applies for relief, or the chill, fever and aching may have been attributed to influenza or rheumatism. Again, the sensations of the patient are not to be relied upon, for they will often say they have no fever, when the thermometer will register a temperature of 100 or even 104 F., or they may feel flushed and have a subnormal temperature. This is particularly true in office patients. Close questioning will bring out the

statement that the patient had felt slightly chilly an hour or so previous.

Another source of error is where the paroxysm occurs at night while the patient is in bed, as I have observed cases where the chill came on in the evening and the maximum temperature would not occur until 10 or 12 p. m.

The importance of recognizing malarial infection in tubercular subjects can scarcely be overestimated, as I have several times observed malarial infection in patients where tubercle bacilli had been present in the sputum and the physical signs of tuberculosis present. There would also be the broad-coated tongue, gastro-intestinal symptoms and vertigo, with chills and fever, indicating malarial infection. This makes it hard to determine as to whether the symptoms are caused by the one disease or both, but as anti-malarial treatment always gives relief and gives the patient a chance to overcome the tubercular infection, it should always be given.

Syphilis and malaria still more closely resemble, both in symptoms and causation, both are due to blood parasites and either is capable of producing very grave nervous symptoms of such similarity that we can only conjecture which disease is the cause of the disturbance, when there is a history of syphilis and plasmodia in the blood; both show a tendency to periodicity, and either may be apparently latent for years. Specific treatment will usually cure either if continued long enough, and should be combined where we have suspicion of these diseases complicating one another. When we remember that probably 10 per cent. of the population are syphilitic, and practically every post-mortem shows tubercular lesions, that malaria is the most rapidly disseminated of infectious diseases, with the possible exception of influenza and dengue, it would appear that these diseases would frequently complicate one another.

Parturition or surgical shock will frequently cause a latent malarial infection to take on new life, and the fever may be attributed to pyogenic infection.

The burden of diagnosis rests upon microscopical examination of sputa and blood, and the value of this is a matter of individual skill and sincerity. If one has not the technical skill to make the microscopical examination, the chances are that blood films will be so poorly made that examination by an expert would be very unsatisfactory, to say the least.

The two case reports following are illustrative of the statements I have made:

CASE 1.—Mr. Albert S., machinist, aged 30, previous health good, no specific history and of good habits. He was attacked about March 1 with light chills, severe headache and general body pains, which grew worse, although the paroxysms were light and fever did not go above 102 F. The pains in head, back of neck and back prompted the diagnosis of meningitis, probably tubercular, and he was given anodyn treatment, with no relief. I first saw patient March 16, in consultation, when he had a temperature of 101, pulse 80, broad-coated tongue, herpetic eruption about mouth, slight bronchitis, loss of appetite, enlarged liver and spleen. Neuritis was severe, causing excruciating pain when the hands were laid on the patient, palpation of cervical ganglia caused severe pain, as did pressure over the posterior division of the spinal nerves. Pupils normal to light and accommodation. He gave a history of vertigo, forgetfulness and delirium at times. Examination of urine was negative. Examination of blood showed plasmodia in abundance at all stages of development.

He was given 10 grs. calomel and 4 grs. phenolphthalein followed by quinin gr. 5 every hour until eight doses were taken. The quinin was repeated the next day, and he showed improvement for a few days. The dose of quinin was reduced to 10 grs. daily and he became worse.

I saw him again March 24, when he was even worse than before. Owing to a disagreement as to diagnosis, quinin was discontinued. I saw him again April 4, when he was in a dying condition, delirious, sordes on teeth and gums and in a state of utter exhaustion. Death occurred April 5, and an autopsy was asked for by the wife that the cause of death might be determined. Examination of meninges showed nothing abnormal except engorgement of large meningeal vessels; there was no evidence of inflammatory process or of tuberculosis. The liver, spleen and kidneys were about twice the normal size and showed extreme congestion; section of the kidney showed cloudy swelling. There was a healed tubercular lesion about the size of a hickory nut in apex of left lung. This patient evidently died of pernicious malaria acquired in his home town, as he had never been away.

CASE 2.—Male, aged 31, tubercular history, had hemorrhage from lungs four years ago; also suffered from malaise and some loss of flesh in spring of 1908, when there was very little expectoration, but large number of tubercle bacilli in sputum. Physical examination did not show consolidation or destruction of lung tissue, he gained in weight and was in better health than for some time.

During summer of 1909 he suffered from loss of appetite, vertigo, headache, chills and fever, and he was finally forced to take to bed. There was bilious vomiting and bile-stained stools, pain

in back of neck and at lumbosacral articulation. He also complained of diplopia.

Quinin was administered and his temperature was normal August 16. He became unconscious August 17 and remained in a comatose condition until August 20, when death occurred, there being paroxysms of chill and fever to the last, when temperature became 107 degrees.

Examination of blood August 10 and 17 showed an abundance of malarial parasites in all stages of development. As no autopsy could be secured, it leaves the cause of death in doubt.

The history of this case is given, as it corresponded with Case 1, and serves to show the difficulty of determining the exact cause of death without autopsy.

The prevalent idea that malaria is a benign disease must be abandoned, and vigorous treatment instituted early in the disease if we would save life.

While brilliant results may be obtained in apparently hopeless cases, this is not always the case, and the clearing of the blood of the parasites is no small task.

Jackson states that he has personal knowledge of several cases in which parasites undoubtedly existed in the blood for five years in spite of treatment, giving rise from time to time to outbreaks of fever, abortive paroxysms and afebrile manifestations, the blood at such times invariably showing the malignant parasites.

Personally, I do not know that I have ever succeeded in completely clearing the blood of the parasites, as there has been a recurrence in most cases; these were probably due to reinfection in many instances, where in others they were evidently a recurrence.

SYMPTOMS AND TREATMENT.

Vertigo is one of the most persistent symptoms of this disease, and when accompanied by gastrointestinal disturbance of a bilious type, numbness, pains, sleepiness and general malaise, a blood examination should be made. Wright's stain is quick and convenient and seems to answer every purpose.

Quinin is a specific for the disease, and will give relief from the symptoms in less time than any other drug if given in sufficient dosage and in a form in which it is absorbed. From 10 to 80 grains should be given daily in combination with an acid to render it soluble. There is usually quite a severe reaction in a chronic case that has not received antimalarial treatment. The rapid destruction of parasites and the breaking down of the corpuscles that contain them cause the formation of enormous quantities of bile, and

bilious vomiting is very likely to follow unless the bowels are moved freely.

Calomel and phenolphthalein serve this purpose very nicely. Iron and arsenic should be given, for the color tests for hemoglobin may show 80 to 100 per cent., but this does not signify that the cells are rich in hemoglobin, as there are so many crippled cells that the available oxygen-carrying power of the blood is diminished, giving rise to shortness of breath. Quinin tablets are so insoluble they should not be depended upon. Treatment should be continued for months, especially in severe chronic cases. Recurrences and primary attacks are much easier controlled.

I do not make any restrictions in the matter of diet, but encourage the patient to take nourishing food whenever the stomach will tolerate it.

Cupping or the local application of a solidified liniment in which campho menthol is incorporated gives relief from the pains due to the neuritis.

DISCUSSION.

DR. W. T. S. DODDS, Indianapolis:—I wish to discuss this question of malaria from two standpoints: First, in regard to the difficulty of diagnosing the estivo-autumnal malaria. It is almost impossible to find the malarial parasite in the peripheral circulation in the estivo-autumnal case after any considerable length of time. The number of observations which I have been able to make, dating back to 1898, the time when the soldiers returned from the South, together with the fact of Craig's observations on the Pacific Coast for the Marine-Hospital Service there, and the experience all over the world in malarial infected districts, leads me to make the statement that one good dose of quinin will drive the parasites from the peripheral circulation, and they would not be found once in a thousand cells unless puncture of the spleen be made.

Wright's stain is an admirable one for blood plaques, but it is distinctly easy for anyone, and even the elect, to mistake the granular blood plaques on a red blood cell for any form of malarial parasites. To diagnose malarial fever from the blood, especially stained blood, is one of the most difficult things that confront us. It is particularly difficult in the dry specimen, and it requires several distinct examinations before you can prove or disprove malarial fever, particularly the estivo-autumnal variety. The artefacts which are occasioned by the rapid drying and fixing of the blood from Wright's stain, are distinctly disturbing to even one who has had great experience in examinations of the blood. Perfectly normal blood will give you observations which are disturbing, and it requires repeated examinations before you can prove your findings. Wright's stain for blood is elegant, but at the

same time it does not fulfill all of the requirements of a blood-stain.

As to the question of the breeding of mosquitoes in malaria, there is no doubt about that, but there seems to be some question concerning previous infection. All cases of chills and fever, with gastro-intestinal disturbance, are not malaria by any means, even if they give way to quinin. A fever which does not respond to large doses of quinin in two or three days is not malarial fever. One may be mistaken. Osler makes the statement that the differential diagnosis of typhoid fever and syphilis is the most difficult in medicine, and if a man can be sure of this, he need not be afraid of his diagnosis of other affections. Malarial fever is extremely rare in Indiana, and in hospital and dispensary service in Indianapolis we have had, I believe, three or four cases of proved malarial fever in the last three or four years. It is so interesting that when we find a case we call in all our friends to see the malarial parasites, and we even question whether the bacteriologist may not have made a mistake in his stain. I want to reiterate the statement that it is extremely difficult to diagnose malaria from the blood and also from the clinical symptoms, for the reason that tuberculosis will give chills. Autoinfection will do it. I am satisfied that many cases are diagnosed malaria when an organism is found which resembles the malarial parasite.

DR. SIMONS, Indianapolis:—I quite agree with the last speaker in regard to the difficulty of diagnosing malaria with a stained specimen. Fresh blood, where it can be properly obtained, is much more reliable and more satisfactory to the man who is making examinations than the stained specimen. However, one who has examined a great many stains or smears can acquire a degree of aptitude in that kind of work, and be able to recognize the malarial parasite without any great degree of error. Of course, one must get acquainted with the stains, and I may say that for Wright's stain there is no set rule by which you can say you have become acquainted with a particular bottle stain and apply the rule for that bottle and not any other. On the other hand, the form of organism and the state in which the blood was taken have a great deal to do with the difficulty. Of course, where you get the large segmenting forms or larval forms, where the pigment granules are numerous, it is not difficult; but where you have the tiny forms, examination with fresh blood is much more satisfactory. When I first came to Indiana a little less than a year ago, I was told that there was practically no malaria in the state. I had had quite a little experience with malaria during the previous summer, and had made post-mortem examinations of two or three fatal cases of estivo-autumnal malaria, and so I was much interested in the question, both from the standpoint of public health

and the manner in which the disease was gotten rid of in the state, as well as in individual cases. To my surprise, this summer, at the state laboratory, we had seventeen samples of blood which showed the malarial parasites, but only two of those, however, could be diagnosed as estivo-autumnal. Only two showed the crescent form, and both of these came from outside of the state—one from Arkansas and the other from St. Louis. About twelve, I believe, out of that seventeen, obtained their infection, according to their physician, in the state of Indiana, and most of them came from along the Wabash river. So that for some reason or other there seems to be an increase in the amount of malaria that has occurred in Indiana during the past summer, and just why that is I hardly know.

I sent out quite a number of circular letters to a lot of older doctors and got some interesting returns. It seems at one time malaria was prevalent throughout the entire state, and caused a very great amount of economic loss. It was so extensive that some doctors stated that it was not at all uncommon to find three to five members of a family down with it at one time, during the months of July, August and September. But that was many years ago. Several doctors from whom I received returns said that from 1865 to 1875 were years when the number of cases of malaria in their particular localities was unusually great. It was in those years, sometimes, that whole families were stricken with the disease, and I have wondered if those were the years in which there seemed to be a sort of cyclic increase. Just why, I have not been able to figure out. A great many physicians have stated that the mosquitoes have not been more common this year than in other years. Some have said that in their particular localities they have been, but just why there has been this increase in malaria I do not know.

I did not hear the whole of the paper, but it seems to me it is timely and will lead men to look for malaria where it is not found. A great many cases are diagnosed, and where the disease is common, a great many cases of other diseases are diagnosed as malaria, by mistake. Malaria is a sort of blanket to cover up diseases that are not properly diagnosed.

DR. HUGO O. PANTZER, Indianapolis:—It takes a courageous spirit nowadays to make the assertion that malaria is still prevalent, to a great extent, in Indiana. I have found malaria all these years and have contended for its existence here, and have met with a great deal of denial and ridicule.

In 1891 I read a paper before our home society at Indianapolis, and later one before the state society, in which I called attention to the fact that malaria with us at that time was the most multiform and prevalent of diseases. I called

attention to rare forms. The title of the paper was, "Six Rare Cases of Malarial Intoxication."

Now, then, I wish to speak in support more particularly of cases of malaria that are distinctly of the estivo-autumnal type—cases of malaria that once having possession of the individual are commonly intrenched with him. I mean that the malarial plasmodium of the estivo-autumnal type, once intrenched in the individual, will, in the ordinary case, continue through life. I took this form of disease in 1881, but it was denominated at the time simple bilious fever, and I can speak of the staying qualities of the microbe. If I should overwork or should grieve, or do anything that may lower my resistive force, I cannot recover myself. I still have all the evidences of malarial disease.

This summer I have found malarial fever returning or repeating itself in more cases than ordinarily, and in almost all of these cases I could get a direct affirmative answer to the question, "When did you have continuous fever in the past?" The patients could refer to the time when they had distinct fever of the estivo-autumnal type. These cases will show it when they are a little bit below par. The estivo-autumnal type of fever is with us almost all the time in those cases that had it in their youth.

DR. B. W. RHAMY, Fort Wayne:—The only cases, with the exception of one, that I have found, have come from out of the state, from Missouri or Mississippi, or from the Spanish-American War. I had one case on the banks of one of our rivers in this state.

I believe the Wright stain, or some modification of the Romanowski stain is best to use for studying this organism. In the differentiation between the plasmodium and blood plaques it reacts very well when they cling to the red cells. The blood plaques have a clear area around them, between the blood and the stained protoplasm of the red cells, while the red-stained protoplasm comes right to the border of the parasites.

DR. MARSHALL (closing):—In regard to the Wright stain, it is recommended by all authorities that I have read on blood examinations for malaria.

As to finding the malarial parasite in the peripheral circulation, they are expected to be found there. I do not know of having read any authority on this subject who would hazard the puncture of the spleen to obtain blood. It is too dangerous an operation for one to do, and is so considered by such men who have written on the subject. I would not want to attempt it myself. I believe that the parasites can be found in the peripheral circulation. I have found them and demonstrated them to the satisfaction of those who saw them at the time.

As to mistaking the blood platelets for the estivo-autumnal form, I can usually find them with the well-stained specimen. With the Wright

stain the chromatin stain will stain red and the body will stain blue. I showed Dr. Hurty a beautiful specimen of this in our city a year ago last May. This man had a chill on Tuesday evening at about 8 o'clock and had to go home from work. On Wednesday evening there was no chill. On Thursday he developed a chill at about 8 o'clock in the evening. I saw him at half-past 10, at which time he had a temperature of 104.5. I took a blood specimen the following day and found a beautiful specimen of the estivo-autumnal type in the blood. In the cases where the paroxysms occur every other day, it will make quite a difference in the blood picture. A parasite in a blood film that is made twelve hours after the chill, in the case where you have a chill every other day, will be larger than in one whose chill occurs once a week. In all specimens of blood taken the following day, where the paroxysm occurs only once a week, the parasite will be very small. I have found that it takes some time for a person to develop a technic to properly make films and stain them, and also in examining for the plasmodia.

THE TREATMENT OF PULMONARY HEMORRHAGE.*

THEODORE POTTER.

INDIANAPOLIS.

The spitting of blood, especially when it occurs for the first time, is to most persons an alarming accident. This alarm is partly due to the natural fear of the loss of blood, and partly to the sudden warning it gives of the probable presence of some serious disease. It is not strange, therefore, that the doctor should usually be summoned urgently, and that he so often finds the patient and his friends in great distress.

There arises, naturally, the pressing desire and demand that something be done to stop the flow of blood. And, naturally, under such circumstances, all of the agents of real or supposed efficacy in arresting internal hemorrhages have been used in the treatment of bleeding from the lungs.

It is somewhat difficult to estimate accurately the value of these agents, since in so large a proportion of the cases the hemorrhage ceases spontaneously, regardless of and perhaps sometimes in spite of the treatment.

Some things are, however, quite generally agreed upon by those who have had large experience and have studied the matter carefully. These agreements are, first, upon the means which are most probably valuable; second, upon those which are of most doubtful utility. Between these two

fields lies a region of more or less uncertainty, in which individual opinion may and does show itself.

The spitting of blood may arise from many causes: First, and most frequently, from pulmonary tuberculosis; then follow such things as heart disease, chronic bronchitis and bronchiectasis, pulmonary abscess and gangrene, cancer or other tumors of the lung or mediastinum, aneurism, the early stage of acute pneumonia, arteriosclerosis, with or without Bright's disease, and vicarious hemorrhage. I deal in this paper chiefly with hemorrhage due to pulmonary disease.

Plainly, then, the first thing to do is to discover, if possible, the cause and source of the bleeding. This done, the question of treatment becomes plain, or at least as plain as our knowledge allows. The treatment of the underlying disease may be left to a later date. The question is, what to do in the presence of the bleeding from the lungs.

The direct methods of stopping hemorrhage by pressure or ligation are of course impossible. We must therefore resort to indirect means. I shall try to point out those which are of most value, and shall discuss briefly some of those regarding which, though often used, there is some question.

The first and most important thing to secure in the presence of pulmonary, as of other hemorrhages, is rest and quietude, quietude of body and mind, and this as nearly absolute as possible. The patient may, except in the unusual cases of profuse bleeding from a ruptured large vessel or aneurism, be assured that there is little danger; that the loss of a few ounces or a pint of blood will, of itself, do little harm and may be beneficial in relieving congestion. Thus the fright may be allayed and nervous excitement lessened.

If the bleeding be in any degree profuse, or be continuous or recurrent, absolute bodily quietude should be enjoined. Briefly and simply, the importance and significance of such quietude may be explained, to secure the patient's cooperation. And this quietude should be secured, as far as possible, for the lungs which are bleeding. Coughing, talking and breathing should be reduced to the minimum, except when the bleeding is profuse and threatens to inundate the bronchial tubes, in which case it must be expelled even at the risk of exciting more hemorrhage.

Having secured this physical and mental quietude, we have done the most important thing in most cases of pulmonary hemorrhage. The tendency to spontaneous clotting and thrombosis will usually do the rest. All the other things which we do are really adjuvants to this.

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 8, 1909.

What are the other things which may help to arrest the bleeding? They lie chiefly in four directions: To lower the blood pressure in the lungs; to divert the blood from the lungs upon the principle of revulsion; to immobilize the bleeding lung as far as practicable; and to use such artificial measures as are safe to promote the general and local quietude.

The last indication is best met by opium, preferably as morphin hypodermically. It lessens cough, lessens the frequency and force of the respirations and promotes mental quietude and sleep. If, as is sometimes true, the patient is afraid to go to sleep lest he may bleed to death while unconscious, we may assure him that the best thing he can do to arrest the hemorrhage is to go to sleep. If the bleeding is profuse or in case where it is protracted, brisk purgation, as by calomel and salines, or by the more prompt agents where an emergency exists, best fulfills the second indication of revulsion and also helps to lower the general blood pressure.

Lowering of the blood pressure and lessening the force of the heart beats is best accomplished by such drugs as aconite and veratrum, which may, under careful watching, be pushed to reduce the heart to sixty or fifty per minute. Such agents should, of course, not be used when a condition of syncope or collapse is already present.

Digitalis, it need hardly be said in this day, slows but strengthens the heart beat and raises the blood pressure, and is, therefore, out of place except in the hemoptysis due to pulmonary engorgement, as in heart disease. What of ergot? Outside of the field of uterine therapeutics it is unfortunate that ergot has such a reputation as a hemostatic. Its value here has wrought much harm elsewhere. Ergot arrests uterine hemorrhage by promoting uterine contraction and not by its influence upon the uterine vessels. If this were clearly understood it would not be used so indiscriminately and recklessly as a general hemostatic. Ergot raises the general blood pressure and the blood pressure in the lungs. It is, therefore, a remedy of very doubtful value, to say the least, and its indiscriminate use in pulmonary hemorrhage should cease.

And what of the other styptic drugs, such as gallic acid, tannic acid, acetate of lead, iron, sulphuric acid, turpentine, hydrastis and hemame-lis? Is there any real evidence that they arrest or retard pulmonary hemorrhage? Certainly not much beyond the unreliable *post hoc ergo propter hoc* evidence. Practically, I have about ceased their use except as a last and purely experimental resort. We must be as sure as possible that we do no harm. Agents like tannic acid, which have

but doubtful general styptic effect, but which do lock up the bowels, should be debated twice before they are used once. And all agents which are likely to produce vomiting should be used with great circumspection.

What an unfortunately absurd thing it is to see one suffering from an intestinal hemorrhage in typhoid fever, or from gastric, pulmonary or cerebral hemorrhage, straining and vomiting under the effect of some stomach-disturbing drug which, in spite of this disturbance and elevated blood pressure, is vainly thought to be exerting some mysterious styptic effect upon the bowels, the stomach, the brain or the lungs. To do no possible harm, especially where violent interference is seldom called for, is the first law of rational therapeutics. This is not therapeutic nihilism; it is simply good morals and good sense.

Measures for limiting the movement of the chest on the affected side, or for compressing the bleeding lung, have come into considerable use, especially in recent years, and are of undoubted value. In cases of slight hemorrhage, where there is little danger of too much limitation of respiration, the whole thorax may be compressed and partially immobilized by a wide towel-bandage. When, however, it can be definitely determined that the hemorrhage comes from one lung, it is best to compress that side of the thorax. A thick wide compress is placed behind and a rolled compress vertically in front, these being held down by an encircling bandage or by one-sided strapping. A thorax clamp might easily be devised for the same purpose. Artificial pneumothorax has also been induced in preantiseptic days, and the Murphy method of immobilizing the lung by injection of nitrogen gas has also been used. Fluids, such as salt solution and sterile oil, have been injected into the pleural cavity for the same purpose. In these cases the salt solution is probably best because it is soon absorbed, whereas the sterile mineral oil, the use of which I have formerly described in this society, is absorbed little, if at all.

These latter methods of compression by gases or fluids are efficient, and may at least be borne in mind as available in serious or protracted cases. Briefly, then, in dealing with hemorrhage from the lungs, the things of most importance and most certain value are: To find if possible and with as little physical and mental perturbation as possible the cause and source of the hemorrhage; to enjoin and secure the most complete quietude; to allay the patient's fears; to reduce the blood pressure and the heart beats; to quiet body and mind by morphin if necessary; to withdraw all food for a time; to divert the blood and lower the

pressure by purgation, and to immobilize the affected side by the simpler and if necessary in exceptional cases by the more elaborate methods, and to do these things with as little physical and mental disturbance as possible.

Quietude at the bleeding point and lessening of the pressure of blood behind that point—these are the chief things which we should and can assist in hemorrhage from the lungs.

The means and methods of dealing with the condition of collapse which may result from pulmonary hemorrhage I do not now discuss. They are practically the same as those used where such a condition results from hemorrhage elsewhere. As a matter of fact, we seldom have to deal with collapse due to bleeding from the lungs, for when a pulmonary hemorrhage is so profuse as to produce a condition of true collapse, it is usually quickly fatal. The syncope from fright, which occasionally occurs, is probably beneficial, and may usually be dealt with by judicious inactivity.

DISCUSSION.

DR. G. T. MCCOY, Columbus:—I well remember the instruction of one of my college teachers, "never be afraid of a hemorrhage that you can see," but, unfortunately, pulmonary hemorrhage is one of the forms of dangerous bleeding that you cannot see. Neither can you positively determine when called to a case of pulmonary hemorrhage how serious this individual case may be, but in a general way you remember and should so state to the patient and the family that pulmonary hemorrhage is seldom fatal. Statistics vary as to the fatality of pulmonary hemorrhage. Some hospitals report as high as 10 per cent. of fatal cases of tuberculosis, dying of hemorrhage, and others as low as 1 per cent. of fatal cases. You cannot always determine the location of the hemorrhage, and the condition of the patient forbids anything but a very slight examination, confining yourself to auscultation only for fear you may add to the seriousness of the case. Hemorrhage may be the first indication that any lesion of the lungs exists, but it does not in any manner indicate the extent or duration of the disease. It may come from a tubercular infiltration of the vessel wall or a destruction of tissue immediately surrounding the vessel and be the only part of the lung diseased. When it is the first manifestation of a lung disease, you need not expect a hemorrhage.

When called to a case of pulmonary hemorrhage, you should at once attempt to gain the confidence of the patient, allay his fears and obtain quiet, not only of the patient, but of his surroundings. This you may often be able to do without the administration of any drug, but in many cases you must do something, or appear to be doing something, to satisfy the patient and his friends, but be sure that you are doing no harm.

Many drugs are recommended to allay bleeding from the lungs, but the majority of them are of no use and many of them positively harmful. Your remedies must be adapted to your patient's condition. Quiet of mind and body is essential, and lowering of the blood pressure, as mentioned by the essayist, is of prime importance. This I generally secure by the administration of nitroglycerin in 1/100 gr. tablets dissolved on the tongue, or 1 minim of a 1 per cent. solution of nitroglycerin administered hypodermically. I follow this with *veratrum viride*, until a marked impression is made upon the pulse, and I seek to maintain this condition for several hours. If there is evidence of collapse, of course this treatment is not indicated.

In regard to the use of opiates, especially morphia, I seldom recommend them. It is only in extreme cases that morphia should be used. I am satisfied that a hypodermic of morphia caused the death of one patient that I saw in consultation by so obtunding the sensibilities of the air cells of the sound portion of the lungs that suffocation from inhalation of blood occurred. Neither is it always safe to relieve the cough, as is so often recommended, as the patient may have to depend upon the cough to relieve his lungs and so avoid suffocation.

With this exception, I am in hearty accord with the teachings of the paper. While to the skilled diagnostician the location of the bleeding point may not be difficult, to the general practitioner such is not the case, and he may often be unable to locate the point of bleeding with sufficient accuracy to adopt some of the methods of strapping or compression of the diseased lung as recommended in the paper.

DR. JOSEPH COLLINS, of New York, was asked to participate in the discussion. He said: I should be glad to participate in the discussion of this paper were it not that what I have to say would be simply a corroboration of what Dr. Potter has said in his paper and what Dr. McCoy has said. I do not see how an expression of personal opinion, if it coincides with others, is a sufficient justification to take up your time. However, it has been my practice in my hospital service for many years, in which I see a large number of cases of tuberculosis, to do nothing in the treatment of hemoptysis save to give a dose of nitroglycerin, and if there is any considerable stress of mind, or any strenuousness of body in the shape of coughing or physical agitation, I combine the nitroglycerin with small doses of morphin. Unlike Dr. McCoy, I think, at times, perhaps oftentimes, and particularly in cases in the hospital, we believe we can tell where the hemorrhage comes from. I appreciate very well that if you are called to see a patient with pulmonary tuberculosis, the disease which we are now considering, and not hemoptysis of pneumonia, or ulceration from bronchiectasis, we are

examining a small cavity; but in the majority of cases, and particularly in hospital cases, we know where that cavity usually is. The application of ice over that region is doubtless of sufficient service to keep on doing it, although it is founded on empirical practice.

What I particularly like about the paper is the caution concerning ergot. What we need in America is not a medical society for the discussion of ordinary papers, but a secret society in which every man shall be pledged to stop using certain drugs, and I should like to see a society so organized that every man who becomes a member of it shall swear on his honor not to use ergot for any purpose, unless he wants to use it for simulating uterine-contractions. In the department of medicine in which I am particularly interested, ergot has done more harm than good. This remedy has been given for treatment of almost every spinal-cord disease from poliomyelitis to tabes, and it is still given a great deal. In the same way I think in such a secret society, as I have mentioned, men should pledge themselves not to use bromids in any condition. Of course, it would be hard to get them to do that, just as it would be difficult to try and stop them from giving ergot in cases of hemoptysis. But the practice is quite common of giving so-called styptics for pulmonary hemorrhage. Interns who are educated at the present day, and are familiar with the literature of twenty years ago, are still inclined, when they encounter cases of pulmonary hemorrhage for the first time, to give tannic acid, iron, ergot and other styptics merely because they believe they must do something. It seems to me that Dr. McCoy's attitude in the matter is right, namely, the less you do the better.

DR. F. B. WYNN, Indianapolis:—Dr. Potter has given us a very succinct presentation of this subject, which forms the basis of this discussion.

It seems to me that the attitude of Dr. McCoy is perhaps in a measure right, namely, that we cannot tell where this hemorrhage comes from, and yet I have been inclined to believe more and more that we generally can tell where it comes from. In the first place, the type of hemorrhage may be noted oftentimes in the sputum, in which the masses are simply tinted a little, these masses being of the size of pin-heads or larger. These pin-head masses tinged with blood may be readily seen within the mucus. These pin-point hemorrhages are not to be dignified by calling them hemoptysis. Such minute hemorrhages may come generally, and come from the bronchial tubes; that is to say, in conjunction with any pulmonary conditions in which there is a paroxysm of coughing, with a prolonged effort, inducing passive congestion of the mucosa of the bronchial tubes, we may have tiny capillaries rupture, and minute hemorrhages of this character occur. We know we do have these paroxysms, notably in cases where there is associated laryngeal tuber-

culosis. Here you may have a prolonged whooping-cough-like paroxysm or paroxysms. The hemorrhage which the doctor discussed is what we may call a hemorrhage *en masse*, and such hemorrhages must come where there is destruction of lung tissue. There may not be more than a mere rupture through the mucosa, there may be necrosis of lung tissue, where several tubercles have undergone caseation or softening, and there is a small or large abscess. More frequently, from a large abscess you will have these hemorrhages occur. Pathologically, these abscesses as they form in tuberculosis cause the connective tissue to give way first, and the last structures to yield in the process of degeneration are the blood-vessels. If you will carefully study a pulmonary abscess, the size of a hickory-nut, you will find stretched across it in different directions arterioles. The tubercular process attacks these arteries from the outside, and produces erosion, so that the adventitia and media are first attacked, and finally, the intima gives way, and you have a gross hemorrhage, so that, generally speaking, these large hemorrhages mean abscess or necrosis of lung tissue.

What Dr. Potter said about rest in the treatment is very timely. Of course, rest can be induced by morphia, and I think a very important matter so frequently neglected by the practitioner is the rest which you secure by mechanical means, such as strapping the sides or using a towel bandage to limit the movement of the lung. You can understand that when hemorrhages occur in the vessels of that lung, and it is contracting and expanding all the time, it is very essential to limit the movements of the lung as much as possible. Rest, therefore, is very imperative, and you must give the lung that rest which is necessary, and that, in conjunction with the other measures that have been suggested, constitutes an excellent treatment for hemoptysis, and not the administration of ergot. Such agents as ergot contract the arterioles, and hence increase the blood tension, and tend to increase the hemorrhage rather than abate it.

DR. POTTER (closing):—I have but a word or two to say. I think Dr. McCoy is correct as regards the difficulty of locating the hemorrhage sometimes, and yet, it seems to me, that ordinarily we can tell where it comes from, especially in private practice, where we know the patient and know he has tuberculosis.

As to the use of opium, there are conditions, as Dr. McCoy has said, where it would be dangerous to use it. If the lungs are getting inundated, if there is a condition of edema of the lungs, and it is widespread, anybody would be careful about the use of opium in such a case, but under other circumstances it is valuable. There is a considerable difference of opinion among some as to the use of opiates in these cases. I know I have talked with Dr. Wynn

about it. There are some who are opposed to its use. If you will read the section on Hemorrhage in Bonney's work on "Tuberculosis," you will find that Bonney thinks that opium is by far the most valuable drug we can use. Anyhow, the thing to do is to keep these patients quiet.

About the nitrates, I should apologize for not saying something about them in the paper. They seem to be coming into use more of late than formerly. A great many speak of them in reducing blood pressure, and they are especially noted for their quick action, as Dr. McCoy indicated; yet, I must say, from my experience, I am inclined to believe that where there are contraindications to their use, such drugs as aconite and veratrum are valuable, but we should wait and watch the patient carefully. My paper was simple of purpose, because it seems to me, after all, dealing with this situation is a simple one. As a matter of fact, we do not often have to deal with the very bad cases, because they are dead before we get there, as a rule, and if we get to a patient who has pulmonary hemorrhage, he will seldom die. The ones who are going to die are generally dead before we get to the bedside, and we may rule out from consideration the treatment of those cases of fatal hemorrhage that occur in a few minutes. I must say, with opportunities for a considerable experience, I do not remember when I have seen anybody die of pulmonary hemorrhage. I have had patients who died of pulmonary hemorrhage, but they were dead before I got there, but not after I saw them. This being true, let us get rid of doing too much, especially of things that are of doubtful value. Let us get a clear view of what we want to try to accomplish. Let us have the bleeding point as quiet as possible. Let us do the things that are helpful to accomplish these results, and avoid doing things that are of doubtful value, or, in all probability, some of them may do more harm than good. Let us not have a person who has a hemorrhage in his brain, lungs or bowels, vomit. What good does any sort of styptic do in stopping hemorrhage when the patient is straining and raising his blood pressure by vomiting?

A REPORT OF ONE THOUSAND OBSTETRICAL CASES WITHOUT A MATERNAL DEATH.

SAMUEL KENNEDY, PH.G., M.D.
SHELBYVILLE, IND.

At 6:30 a.m. on Thursday, Nov. 25, 1909 (Thanksgiving Day), I had an obstetrical case, which was the tenth for this mother, and the thirteen hundredth for me.

While this report contains a summary of my first 1,000 cases without the death of any mother,

I might add that the chain is still unbroken and that I have not had a death in the entire 1,300 cases.

I shall leave the other 300 cases for a subsequent report.

I have had this report under preparation for more than a year past, but have not completed it sooner, owing to the immense amount of labor involved in carefully tabulating 1,000 different records.

Since beginning the practice of medicine I have kept an accurate record of every one of my obstetrical cases on blanks printed for the purpose as follows:

No.

1. Name of child.
2. No. of child of this mother.
3. Sex.
4. Color.
5. Date of birth, hour, day, date, month, year.
6. Born alive.
7. Legitimate.
8. Natural labor.
9. When begun.
10. How long it lasted.
11. Mother's maiden name.
12. Mother's age.
13. Mother's birthplace.
14. Father's name.
15. Father's age.
16. Father's birthplace.
17. Father's occupation.
18. Presentation.
19. Remarks.

While this series of cases contains many of the abnormalities usually found in obstetrical practice, the fact of having no maternal deaths can be attributed in a large measure to the fact that I am practicing medicine in a city of almost 14,000 inhabitants, which is surrounded by a fertile and thickly populated agricultural country. Many of these cases have been in the country, among a healthy and robust people living an out-of-door life. Besides this, a large proportion of them have been in the well-to-do class of families having the advantages of thoroughly aseptic conditions, and usually the aid of a trained or at least an experienced nurse.

The following is a summary of my 1,000 cases:

Primipara	368
Multipara	632
Males	536
Females	471
White	999
Colored	8
Legitimate	1,001
Illegitimate	6
Twins (pairs)	7
Still-births	11

Presentations:	
Vertex	968
Breech	21
Shoulder	4
Face	4
Hand and foot.....	7
Vertex and hand.....	2
Knee and hand.....	1
Post-partum hemorrhage	9
Convulsions	14
Varicose veins	3
Hour-glass contraction of uterus..	3
Adherent placenta	8
Placenta prævia marginalis.....	4
Maternal deaths	0
Prolapse of cord.....	3
Short-cord	2
Cephalic version	3
Hydrocephalus	3
Spina bifida	2
Hydrocephalus and spina bifida...	1
Club-foot	2
Cord around neck, once.....	198
Cord around neck, twice.....	66
Cord around neck, three times....	11
Phlegmasia alba dolens.....	2
Hare-lip	3
Operations:	
Forceps	78
Uterine inertia	11
Impending fetal asphyxia.....	2
Eclampsia	8
Delayed labor from improper engagement	14
Other causes	43
Perineorrhaphy, primary, incomplete	17
Perineorrhaphy, primary, complete	3
Curettement	4
Episiotomy	8
Circumcision	7
Hare-lip	3

In the 1,000 cases were 655 different women, as follows:

397.....	1 time.....	397
203.....	2 times.....	406
33.....	3 times.....	99
15.....	4 times.....	60
4.....	5 times.....	20
3.....	6 times.....	18
<hr/>		<hr/>
655		1,000

The number of each labor is as follows:

First	368	Eighth	25
Second	236	Ninth	10
Third	149	Tenth	8
Fourth	84	Eleventh	5
Fifth	47	Twelfth.....	3
Sixth	32	Thirteenth ...	2
Seventh	31		
<hr/>			
1,000			

It is interesting to note that the smallest number of births occurred in August (65), and the largest in December (103).

The number of births by months is as follows:

January	91	July	92
February	82	August	65
March	90	September	85
April	76	October	71
May	80	November	72
June	93	December	103
<hr/>			
1,000			

Three hundred and sixty-eight were cases of primipara, the youngest of whom was 15½ years of age and the oldest past 39.

Six hundred and thirty-two were cases of multipara, the oldest of whom was 45½ years of age.

There is a slight excess of males over females, there being 65 more males than females.

This report contains 78 cases of forceps delivery, but it does not include any of my consultation cases, which have nearly all been forceps cases. I find that of my recent cases a larger percentage are forceps cases than formerly, largely from the fact that an enlarged experience gives one more confidence in their use, and I find that by this means I am able to save the mother many hours of useless suffering. I am sure that forceps when judiciously and skillfully used are absolutely without danger to either mother or child.

I have never at any time seen a case of puerperal septicemia in one of my own cases. From my experience I should say that it is very rare in



general practice, and is found almost altogether in hospitals where infection is more apt to occur.

In puerperal eclampsia I have learned to depend wholly upon tinct. veratrum viride hypodermatically administered, ten drops at a time until the physiological effect is produced. As a rule, it acts in a few minutes, and while I have had 14 cases I have not had a death from this cause. Besides these 14 cases, I have seen a number of cases in consultation in which it was administered in every case also without a death.

In case of a perineal rupture, I make it a rule to take the necessary stitches within as few minutes after delivery as possible, and a good result usually follows.

All three of these hare-lip cases were operated upon before they were six months old, and each secured a good result.

In one case the mother had five or six convulsions before my arrival. I delivered as quickly as possible with forceps and had a complete per-

ineal rupture. The child weighed 12½ pounds and had hydrocephalus and spina bifida. It lived eight months. The mother had several convulsions after delivery, but recovered. I have attended her in three confinements since, with normal delivery in each case. A photograph of this child is here given.

In conclusion, I desire to say that I have made it my invariable rule to answer my obstetrical calls (when I have been previously engaged to attend the case) *immediately*, day or night, no matter what other engagements I might have on hand. I have many times left several patients waiting in my office, and at other times deferred important engagements in order to answer these calls promptly. If I go out even for a few minutes when I am expecting a call of this character, I always leave explicit directions how I can be found, and am therefore able to respond at once. At times I find this very inconvenient, but nevertheless I follow this practice rigidly.

79 East Franklin Street.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 170, Vol. III.)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

ROSENTHAL, ISAAC M.—Ft. Wayne (1831-1906). S. T. 1907, 473. Dr. Rosenthal was born in Germany. He practiced medicine in Ft. Wayne continuously for forty-six years. He was a Jew, not narrow, and was loved by all.

"A curious incident in his life was the fact that he suffered from a purulent otitis media for more than fifty years, caused by the explosion of a gun. He steadfastly refused surgical relief, and finally died from an abscess of the brain with diffuse meningeal infection caused by an extension of the middle ear disease to the temporo-sphenoidal lobe of the brain. If he had consented to the removal of this focus of infection years before he should be living now in a fair state of health."—Dr. G. W. McCaskey. See I. M. J., Vol. xxv, 195.

ROSS, CHARLES A.—U. S. Army (1875-1901). S. T. 1901, 497. Soon after graduation, in order to gain greater surgical experience, he decided to enlist in the army. He successfully passed the rigid examination necessary in August, 1900, and was soon commissioned an assistant surgeon in the U. S. Army and ordered to the Philippines. He had been in the islands only about three months when he was stricken down.

"Dr. Ross died on the fighting line in northern Luzon, Philippine Islands. A soldier had been wounded, and Dr. Ross, accompanied by two hospital stewards, went to carry the wounded man to the hospital tent. It was while in the performance of this duty that he was fired upon from ambush, and his young life ebbed

away there upon the battle-field while heroically ministering to one who was fighting for his country."—Dr. C. T. Hendershot.

He was born in Crawford county, Indiana, and had for a short time practiced at Leopold, Perry county.

ROSS, JONATHAN.—Blountsville (1828-1888). S. T. 1888, 211. Dr. Ross enlisted in the Thirty-sixth Reg. Ind. Vols. and later was promoted to first lieutenant in Company K, and was mustered out at the close of the war with his regiment.

ROSS, JUSTIN P.—Marion (1840-1896). S. T. 1896, 261.

ROUS, HANNAH C.—Vevay (1854-1905). S. T. 1905, 457. Dr. Rous was secretary of the Switzerland County Medical Society from its organization until the year before she died. I never sent her a blank for a report on necrology that she did not at once reply, "No death this year," or give the name if any member had died. She deserves this trifling tribute for her faithfulness.

RUBUSH, DAVID P.—Sharpsville (1847-1904). S. T. 1906, 502. At the age of 16 he left Tennessee and came to Indiana, where he enlisted in the service of his country and was assigned to the Twenty-fifth Independent Battery, Light Artillery, where he served with credit till the close of the civil war, receiving an honorable discharge. See I. M. J., Vol. xxii, 473. Also Med. and Surg. Monitor (with picture), Vol. vii, 145.

RUNDELL, ALPHARIS E.—Clay county (1850-1900). S. T. 1900, 499.

SANBORN, PERLEY P.—Angola (1861-1897). I. M. J., Vol. xv, 380.

SANFORD, JAMES H.—Shelbyville (1838-1903). S. T. 1904, 361.

SCHAFER, ALBERT F.—South Bend (1863-1898). S. T. 1899, 391.

SCHMIDT, ELIZABETH.—Indianapolis (1827-1904). I. M. J., Vol. xxii, 418.

SCHMIDTZ, CHARLES.—Ft. Wayne (1809-1887). S. T. 1887, 196.

SCHULTZ, OSCAR T.—Mt. Vernon (1848-1890). S. T. 1890, 164.

SCOTT, DANIEL V.—Jeffersonville (1872-1904). S. T. 1904, 363.

SCOTT, GIDEON.—Greentown (1838-1898). S. T. 1898, 388.

SCOTT, WILLIAM.—Kokomo (1831-1895). Dr. Scott was a native of Ohio; a graduate of Rush Medical College. In 1881 he accepted the chair of diseases of the throat and respiratory organs in the Fort Wayne College of Medicine, which he filled until 1883. He was then appointed professor of diseases of the rectum and genito-urinary organs, and filled that position until 1888, when he resigned. For biography see Stone, 460; I. M. J., Vol. xiv, 275.

SCRAMBLING, WILLIAM H.—Slash, Grant county (1842-1881). S. T., 1882, 196.

SCRIBNER, WILLIAM AUGUSTUS.—New Albany (1800-1868). Born in Massachusetts, Feb. 19, 1800, and died at New Albany, April 16, 1868. Was a member of the Medical Convention, June 6, 1849.

SCULL, DAVID C.—Lebanon (1839-1897). S. T. 1898, 377. He served three years as a soldier in the Thirteenth Reg. Ind. Vols.

SEATON, WILLIAM H.—Indianapolis (1873-1899). S. T. 1900, 336.

SEVERANCE, LA GRANGE.—Huntington (1839-1893). S. T. 1893, 256.

SEXTON, HORATIO G.—Rushville (1796-1865). Born in Andover, New Hampshire, Jan. 21, 1796. See *Physicians of Rush County*, Vol. ii, p. 202.

SEXTON, MARSHALL.—Rushville (1823-1892). S. T. 1892, 286. Son of the above. Born, lived and died at Rushville. Was surgeon for some months of the Fifty-second Reg. Ind. Vols. Was elected president of the State Medical Society in 1881 and presided in 1882. He contributed the following papers to the State So-

SHIPMAN, NORBOURN N.—Seymour (1829-1902). S. T. 1902, 423. He contributed an article on "Preternatural Sleep," *Trans.* 1892, 146.

SHIRTS, ELMER.—Bloomfield (1861-1908). J. I. S. M. A., Vol. i, 112.

SHIVELY, JAMES S.—Marion (1813-1893). S. T. 1893, 260. He was born in Morgantown, Va., April 8, 1813. After due preparation for the practice of medicine he located in Marion, where he remained until his death. He was respected and honored by all. He was four times elected to serve his constituents in the State Legislature. To him, as joint senator, the profession is indebted for the present law governing the practice of



ISAAC M. ROSENTHAL.

ciety: "Case of Dislocation of Femur Upward and Backward, Reduced by Manipulation," *Trans.* 1869, 31; "Rupture of the Uterus and Vagina, Case —, Recovery," *Trans.* 1873, 107; and "President's Address, Boards of Health, Medical Legislation, and the Rights and Duties of Physicians Under the Law," *Trans.* 1882, 1. He is said to have been the first white male child born in Rushville and the first graduate of medicine in Rush county. See *memoriam*, I. M. J., Vol. x, 182.

SHELLHAMER, CAREY.—Pioneer (1845-1907). S. T. 1907, 494.

SHIDLER, ARTHUR L.—Lakeville (1860-1899). S. T. 1900, 337.

medicine. See *Stone*, 465, for biography and portrait. I. M. J., Vol. xi, 376.

SHOPTAUGH, SHELTON H.—Princeton (1840-1898). S. T. 1899, 387.

SHOWALTER, D. T.—Montpelier (1845-1883). S. T. 1883, 272.

SIEBER, JOHN A.—Ferdinand (1853-1883). S. T. 1883, 279.

SIMISON, JOHN.—Romney (1824-1902). I. M. J., Vol. xxi, 134.

SINEX, WILLIAM G.—New Albany (1826-1899). Was born in New Albany, Nov. 27, 1826, and died in

the same city, March 25, 1899. He was a graduate of Asbury (Greencastle) College. Graduated at one of the medical schools of Philadelphia. He was one of the members of the Medical Convention of 1849.—Mrs. Olive E. Sinex, Indianapolis, daughter-in-law.

SKIFF, CLARK.—Selma (1826-1888). S. T. 1889, 212.

SLOAN, GEORGE W.—Indianapolis (1835-1903). S. T. 1903, 354. A native of Pennsylvania, he came to Indianapolis as a child in 1837, and remained there until he died. He was not a practicing physician, but was a lecturer on pharmacy in the Indiana Medical College, and in 1879 and 1880 was president of the American Pharmaceutical Society.

He was a first lieutenant in Company B, 132d Reg. Ind. Vols., in the Civil War. See biographical sketch. I. M. J., Vol. xxi, 399; also, *ib.*, Vol. xxii, 246.

SLOAN, JOHN.—New Albany (1815-1898). S. T. 1898, 392. Dr. Sloan was born in Westbrook, Maine, Sept. 15, 1815. Graduated at Bowdoin College in 1837, and located in New Albany in 1838. Here he lived until the date of his death.

"His was a long career. He was in active practice before the days of anesthetics, when calomel was the cure-all and blood-letting a 'fine art.' He was in the prime of manhood when the Civil War came and gave a new impetus to the study of surgery. The afternoon and evening of his life witnessed the advent and continuance of the antiseptic era."—Dr. E. P. Earley.

He was present at the formation of the State Society in 1849, and at that meeting was erroneously accredited to Crawfordsville. See I. M. J., Vol. xvi, 414.

SMITH, ANDREW J.—Wabash (1830-1900). I. M. J., Vol. xix, 284.

SMITH, HUBBARD M.—Vincennes (1820-1907). Dr. Smith was well known as a physician, writer and educator. Following his graduation in 1847 he located in Vincennes, where he commenced the practice of medicine, and continued the same until his death. He was the first physician in Vincennes to recognize the presence of cholera in 1849.

He was among the first to champion the cause of Abraham Lincoln for President, through the columns of the Vincennes Gazette, in 1860, and was made postmaster at that place from 1861 to 1869.

Dr. Smith contributed an interesting article on "Medicine in the Northwestern Territory: A Contribution to the Early Medical History of Indiana." Trans. 1906, 438. This article was reproduced in the columns of this JOURNAL, February, 1909, 52. He was a poet of no mean order. A collection of his poems entitled "At Midnight and Other Poems" was published in book form by Carlin & Hollenbeck in 1898. His last contribution was "Historical Sketches of Old Vincennes."

He believed it to be his patriotic duty to take an interest in the affairs of his city, his state, and his nation on all matters of public interest, and he did so.

For biography see JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION, Vol. i, 29. Also, American Biographical History of Eminent and Self-made Men of the State of Indiana, 1880, Second District, p. 32. A letter, I. M. J., Vol. xxv, 462. See poem, "Conscience," I. M. J., Vol. xvi, 316.

SMITH, JOHN W.—Gosport (1830-1903). S. T. 1903, 355.

SMITH, LESTER F.—Brazil (1883-1907). S. T., 1907, 477.

SMITH, THEOPHILUS E.—Columbus (1846-1890). S. T. 1890, 166. See I. M. J., Vol. xi, 179.

SMITH, WILLIAM G.—Winchester (1837-1892). S. T., 1893, 247.

SMITH, WYCLIFFE.—Delphi (1851-1900). Was surgeon of the 161st Reg. Ind. Vols. in the Spanish-American War. Was accidentally killed by an express train near Delphi, Dec. 29, 1900. See I. M. J., Vol. xviii, 315.

SMYTHE, GONSOLVO C.—Greencastle (1836-1897). S. T. 1897, 354. Dr. Smythe began practice at Fillmore, near Greencastle, in 1860. He entered the army in 1862, as assistant surgeon of the Forty-third Reg. Ind. Vols., and served until the close of the war, when he began practice at Greencastle. In 1879 he was elected to the chair of Medicine and Sanitary Science in the College of Physicians and Surgeons at Indianapolis. In 1890 he was elected president of the State Medical Society. He contributed a number of papers to the State Society: "Acute Articular Rheumatism," Trans. 1888, 33; "The Hydro-therapeutic Treatment of Typhoid Fever," Trans. 1889, 60; "President's Address; The Influence of Heredity in Producing Disease and Degeneracy, and Its Remedy," Trans. 1891, 1, and "The Treatment of Alcoholism," Trans. 1895, 338. He was also a frequent contributor to medical journals. He is the author of a book on "Medical Heresies, Historically Considered," a book of 228 pages, published by the Blakiston house in 1880. It is claimed "that he was the first physician in America to use the hypodermic syringe." See I. M. J., Vol. xv, 382.

SPAIN, ARCHIBALD W.—Terre Haute (1837-1898). S. T. 1898, 385.

SPANN, BENJAMIN F.—Anderson (1830-1894). S. T. 1894, 225. See I. M. J., Vol. xii, 329.

SPARKS, JAMES B.—Carthage (1833-1895). S. T. 1896, 253.

SPINNING, JOHN N.—Covington (1822-1890). S. T. 1890, 162.

SPURRIER, JOHN H.—Rushville (1829-1902). S. T. 1902, 424. He was assistant surgeon of the Sixteenth Reg. and later surgeon of the 123d Reg. Ind. Vols., serving in the latter to the close of the war.

STAGE, LEWIS J.—Vallonia (1828-1880). S. T. 1882, 195.

STANTON, D. S.—Portland (1822-1906). S. T. 1907, 487.

STARR, ILER D.—New Albany (1874-1899). S. T. 1900, 338.

STEELE, ARMSTRONG T.—Waveland (1834-1884). S. T. 1887, 187.

STEELSMITH, JOHN M.—Boone county (1825-1900). S. T. 1900, 339.

STEPHENSON, JOSEPH.—Pendleton (1819-1886). S. T. 1886, 213.

STEVENS, BENJAMIN C.—Logansport (1850-1908).

STEVENS, OLIVER P.—Maxinkuckee (1820-1888). S. T. 1888, 214. Formerly practiced at Kendallville, removed to Wisconsin, and during the Civil War was surgeon of the Forty-second Reg. Wisconsin Vols. At the close of the war he returned to Indiana.

SUTTON, GEORGE.—Aurora (1812-1886). S. T. 1886, 219. Dr. Sutton was born in London, England,

June 16, 1812, and came to America with his parents when young (1819). Graduated at the Ohio Medical College in 1836, and the same year began the practice of medicine at Aurora. In the spring of 1843 he was instrumental in organizing the first county medical society in Dearborn county. He joined the State Medical Society in 1852, and was elected its president in 1869 and presided in 1870. The State Transactions contain the following papers from his pen: "A Report to the Indiana State Medical Society on Asiatic Cholera as it Prevailed in This State in 1849-50-51-52," 1853, 109; "Preliminary Report on Milk Sickness as it Prevails Within the State of Indiana," 1853, 176; "Report on Erysipelas," 1856, 41; "Report on Cholera," 1867, 85; and 1868, 51; "President's Address: Man's Power Over Nature, and Medicines as Means by Which He Aids and Controls the Laws of Life," 1870, 1; "Report on the Diseases of Indiana for the Year 1872, with a Brief Outline of the Medical Topography and Climatology of Different Localities," 1873, 61; "A



GEORGE SUTTON.

Report on Trichinosis, as Observed in Dearborn County in 1874," 1875, 109; "On the Reduction of Dislocation of Hip-joint by Manipulating the Femur as a Lever Over a Fulcrum Placed in the Groin," 1876, 139; "Placenta Prævia," 1878, 111; "Parasites, and Their Effects Upon the Human System," 1883, 53, and "A Review of the Epidemics That Have Occurred in South-eastern Indiana During the Last Fifty Years, and the Observations on Change of Type in Our Endemic Malarial Diseases," 1885, 104. Every one of these reports was prepared with extreme care and all are valuable. Under the head of "Epidemics," I have referred to the valuable paper of Dr. Sutton, "Remarks on an Epidemic Erysipelas Known by the Popular name of 'Black Tongue,' which prevailed in Ripley and Dearborn Counties, Indiana," *Western Lancet*, November, 1843. This whole article was reproduced in "Nunneley on Erysipelas," ed. 1844, 95. Various other medical papers, as well as articles on scientific subjects, have been contributed from time to time by Dr. Sutton. For biography see Robson, 293; Stone, 686; Am. Biographical History of Eminent and Self-made Men of the State of Indiana, 1880, Fourth District, 65.

(To be continued.)

OCCIPITO-POSTERIOR POSITIONS.

B. F. KUHN, M.D.

ELKHART, IND.

From observation and experience I am led to believe that occipito-posterior positions are more prolific for trouble and anxiety for the obstetrician than any other one abnormal condition that might be named. Not that they are so difficult to manage, but owing to the fact that they are frequently unrecognized, and when the forceps are resorted to, an attempt to deliver the child as a normal case proves futile and often disastrous to both mother and infant.

Requiring, as they frequently do, the use of the forceps, it becomes absolutely necessary that the physician understands the correct mechanism of delivery that he may terminate it with ease and safety rather than have it result in serious injury and perhaps death to the child, and great damage to the birth canal of the mother.

That we may have an understanding of its relative frequency a little review of the following may be advantageous.

Of all labors at full term, about 96 per cent. (96.97, Williams, p. 184) are cases in which the occiput presents. Of these, 50 per cent. are L. O. A., which is considered the normal position. Another 10 per cent. occupy the R. O. A. position and are probably delivered as easily as the former. This leaves 20 per cent. occupying posterior position at the beginning of labor. Of this number, 17 per cent. occupy the R. O. P. and but 3 per cent. the L. O. P. position. This makes 87 per cent. occupying the right oblique diameter and but 13 per cent. occupying the left oblique.

Of the 20 per cent. occupying posterior positions by far the greater number will rotate to an anterior position and labor terminate normally, but the duration will be longer and the suffering more severe owing to the greater rotation required to bring the occiput anterior. In normal anterior positions the head must rotate $\frac{1}{8}$ of a circle, while in posterior positions it must rotate $\frac{3}{8}$. Varnier compared a great number of cases and found posterior position prolonged labor on an average of three hours and sixteen minutes in primiparous and one hour and fifty minutes in multiparous women.

There is reason to believe that more than 20 per cent. occupy posterior positions, as rotation forward may occur before the position is diagnosed. Michaelis of New York found 30 in his last 100 cases. A certain number will fail to

* Read at the meeting of the Elkhart County Medical Association, held at Nappanee, Ind., Oct. 7, 1910.

rotate anteriorly, but instead will turn backward and will remain persistently in the hollow of the sacrum until delivered or labor is arrested. Even in this position at least the majority of cases will be delivered by the natural forces if given sufficient time. Varnier notes 30 out of 35 cases in which spontaneous delivery occurred. I am at a loss to understand Varnier's statistics on this point unless it was due to most of his cases being premature and small in which it is possible for labor to terminate without aid, as my own observation leads me to believe that but a small number would get through without instrumental assistance. However, we must bear in mind that if left to themselves to either terminate the labor or die in the attempt some seemingly hopeless cases would get through, as Nature will accomplish wonders sometimes.

Obviously the number requiring assistance will depend on the disposition and propensities of the attendant. And where the obstetrician is not skilled in the use of the forceps it probably is best to leave it to Nature and let the woman suffer it out unless it is seen she will die in the attempt. At the present time there is no doubt in my mind that there is a legitimate field for the use of the forceps for no other purpose than to save the mother prolonged suffering, and these occipito-posterior positions will furnish most of the cases of this kind.

Varnier observed posterior rotation in 2 per cent. of cases, West in 3 per cent., Williams in 8.79 per cent., and Edgar in 4 per cent.

Various causes are supposed to play a part in bringing about posterior positions. In the first place the anterior curve of both the spinal column and the anterior abdominal wall holds the uterus in a state of partial flexion and the fetal body with the head flexed and the limbs folded up, having a somewhat semilunar shape, tends naturally to adapt itself to the curve which usually throws the back of the child to the front and the head, settling in the pelvis, assumes one of the oblique diameters. When for any reason the uterus is devoid of the usual curve the child will, of course, be liable to assume some other position.

An excessive amount of liquor amnii is supposed sometimes to play a part in the causation. As to the cause of posterior rotation, imperfect flexion is supposed to play the principal rôle, acting by allowing the anterior part of the head or bregma to first come in contact with the pelvic wall or floor and being rotated forward throws the occiput in the hollow of the sacrum.

A relaxed or lacerated pelvic floor may be the cause, as it fails to furnish the necessary resistance to rotate the occiput forward.

A very roomy pelvis may be the cause by acting in the same way. Again, the fronto-occipital diameter may be so firmly engaged in the oblique diameter of the pelvis that anterior rotation is impossible.

The diagnosis of this condition is sometimes very easy and at others very difficult, and there is no doubt that it is frequently overlooked, the case going on and terminating by anterior rotation without the accoucheur ever suspecting the cause of the protracted labor.

External palpation of the abdomen is very helpful in determining the condition, showing the feet and arms forward and not the back as should be the case. The heart-sounds may be heard in the flank on the side corresponding to the back of the child.

The pains in the first stage of labor are frequently irregular and abnormal. By vaginal examination the head may be felt through the fornices, and after dilatation the small fontanelle will be found in the posterior part of the pelvic cavity with the sagittal suture running in the line of an oblique diameter. The presence of the dilating os far back in the pelvis is suggestive, and Michaelis says that one will rarely go astray in diagnosing a posterior position from early rupture of the membranes and the slow dilatation of the os. Notwithstanding all this, there are cases that are very difficult to recognize, for it must be borne in mind that it is not always possible to be absolutely sure which fontanelle we are feeling or know to a certainty the suture we have discovered is the sagittal. With the patient under an anesthetic preparatory to applying the forceps, palpation can be carried out more satisfactorily and the position made out with more certainty. Under the most favorable circumstances, the information to be derived from vaginal touch alone is not more accurate than that obtained by abdominal palpation, and in vertex presentations the fontanelles are not infrequently mistaken for each other, and occasionally breech and face presentations escape differentiation. Moreover, in the latter part of labor, after the formation of a fluid tumor beneath the skin covering the presenting part, detection of the various diagnostic points often becomes impossible. The introduction of the gloved hand into the vagina and passing it alongside the head until the ear or face is palpated will make it certain, and where there is any doubt this should always be done, as it will make the application of the forceps easier and also enable one to know which way rotation should take place.

TREATMENT.

As to the possibility of having the mother carry out any postural treatment during pregnancy that would correct a faulty position there is great doubt, but there seems to be grounds for the belief that posture during labor may be of help. As soon as the condition is recognized the patient should be made to lie on the side towards which the child's back is directed. This is said to favor flexion and cause the occiput to rotate forward. Having the patient kneel at the bedside is said also to favor rotation.

The natural forces aided by posture failing, it devolves on the obstetrician to decide when it is advisable to resort to further measures.

In some cases it is possible by inserting the whole hand into the vagina to grasp the head with the thumb and fingers and rotate the occiput anteriorly. When attempting this maneuver advantage may be taken of the opportunity to pass the hand up back of the head or at the side so as to feel the ear, the neck or the face to determine definitely the exact position.

Rotation with the hand, it will be found, can be carried out in but a very limited number of cases, and when it is found to be impossible the forceps should be applied, and in doing so there are several methods of procedure that are to be considered. First, that usually followed in Germany and Austria of applying the forceps to the sides of the pelvis, irrespective of the head, and making no attempt whatever to rotate the head to an anterior position. Occasionally the head will rotate during delivery, but this is rather unusual. It is said that in the countries where this is the practice the number of episiotomies and severe perineal lacerations are exceedingly large.

The second method consists in applying the forceps as before and attempting to rotate the head at the same time traction is made, the usual practice in America. In this procedure the forceps frequently slip and injure the head or damage the maternal soft parts. In addition to losing their grasp, the forceps are prone to rotate on the child's head, instead of turning it, and in so doing are very liable to do it injury.

The third method is what is known as Scanlon's maneuver and consists in the double application of the forceps. The first step consists in applying the forceps to the sides of the child's head, with the curve looking forward or toward the child's face, and in the second application with the curve to the occiput.

Williams of Baltimore is said to be the chief advocate of this procedure in this country, and says that his experience has been so satisfactory that he has ceased to dread occipito-posterior

positions, feeling that when necessary delivery can be readily and safely accomplished.

Edgar advises the pelvic application of the forceps in high cases and bringing them down, then reapplying the forceps and rotating to an anterior position.

The procedure as given by Williams is as follows, applying it to the R. O. P., which, it will be remembered, constitutes over four-fifths of the posterior positions: The right hand is passed into the left posterior segment of the genital tract and the right or posterior ear sought for. Over it the left blade is applied. The left hand is then passed into the right side of the vagina, and over it is introduced the right blade, which is then rotated anteriorly until it comes to lie opposite the blade first introduced.

The forceps are then locked and downward traction is made until the head impinges on the pelvic floor, when a rotary motion is imparted to the forceps by which the occiput is slowly rotated to a right transverse, and later on to an oblique anterior position.

The forceps, having become inverted, must be taken off and reapplied in the usual manner to the head, which now occupies a right anterior position when delivery is readily accomplished.

A few practical points should be borne in mind that will aid very materially in the various steps of this procedure; one is that where difficulty is experienced in introducing the blade of the forceps if the hand is introduced into the vagina the difficulty can readily be determined; another is where the blades refuse to lock a rotation of one or both blades, accompanied by an up-and-down motion, will cause them to adapt themselves to the sides of the head so as to bring the locks in apposition. Another is where one blade cannot be inserted as far as the other, as when an attempt is made to lock them the locks will not meet by about two to two and a half inches. This usually means that one blade is around the occiput and against the neck and should suggest the changing of the blades to a new position. In rotating the head the handles of the forceps should be given a long sweep so as to avoid bringing the blades in forcible contact with the pelvic wall and so doing the mother serious injury. While making traction the forceps should never be rocked backward and forward, as this will cause the extreme ends of the blades to cut the child's head and will not aid in extraction. In exceptional cases, in which the pelvis is so completely filled that the most thorough examination leaves some doubt as to the exact position, and consequently one is at a loss to know which way to attempt to rotate, I have resorted to a little

maneuver of my own that has proven very satisfactory in a number of instances. It consists in applying the forceps to the sides of the pelvis and, without traction or even with a pushing back on the head, trying rotation, first in one direction and then in the other, and determining which way offers the least resistance, and carrying it in this direction until complete anterior rotation is accomplished.

In conclusion, I would say that the double application of the forceps or Scanzoni's maneuver, as it is called, is certainly the most satisfactory way of delivering cases of occipito-posterior positions, inasmuch as it changes an abnormal position to a normal one and enables delivery to be completed without undue violence to either mother or child, and when once properly understood and carried out by an obstetrician will certainly not be abandoned.

SOME PRACTICAL CONSIDERATIONS ON THE BACTERIOLOGY OF THE GASTRO-INTESTINAL TRACT.

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Strasburger¹ has shown that "under normal conditions one-third of the dried substance of the feces of a healthy individual ingesting a normal diet consists of bacteria." Myriads of bacteria are, therefore, normally present in the intestines of man at all times. Matzuchita² isolated 44 varieties of bacteria from 48 specimens of feces. This very fact renders extremely difficult the study of the relation between certain obscure diseased conditions and variations either in the number, virulence or varieties of the micro-organisms in the digestive tract of an individual.

Classified on the basis of the production of toxins, bacteria are of two kinds. Certain varieties, such as diphtheria bacilli, elaborate a poison which passes into the media in which they are growing. When these organisms are filtered out of a broth culture, the clear, bacteria-free fluid is extremely poisonous. Other organisms, e. g., typhoid bacilli, do not produce toxins in the medium in which they grow. It is not difficult to see that so long as the wall of the intestine is intact so that the germs cannot get into the tissues, and are merely permitted to grow in the lumen of the bowel, the class of bacteria which produce exotoxins are of the greater importance in relation to the obscure toxemias of intestinal

origin. Numerous bacteria that are non-pathogenic for man, in growing, elaborate substances which, when absorbed, may be quite poisonous. The substances which may be produced in the bowel by bacterial growth will be referred to later.

There are a number of influences that affect not only the number, but also the varieties of bacteria, in the human digestive tract. The first of these is age. At birth and for a few hours thereafter the gastro-intestinal tract is absolutely sterile. Before the first day of life is over, bacteria have gained entrance and the intestine is never afterward free of them. The fact that bacteria are always present in the lumen of the normal intestine has raised the question as to whether they are not really necessary to health. Nuttall and Thierfelder³ removed several guinea-pigs by Cesarian section, kept them under absolutely aseptic conditions, fed them sterile milk and allowed them to breathe only sterile air. They prospered and were in no way different from the control pigs up to the time they were killed (on the eighth day), and their gastro-intestinal tracts examined and found to contain no bacteria. Schottelius⁴ attempted the same experiment with young chickens, but these did not thrive. They did well for 12 days and then began rapidly to lose weight, while the controls gained weight steadily from the first. Schottelius thought the diet might be an important factor in the result, and suggested that animals might thrive on a proteid diet with bacteria-free intestines, but not do well on a carbohydrate diet. The stomachs and intestines of polar bears, penguins and other animals of the polar regions contain either very few or no micro-organisms. Hence the necessity of an intestinal bacterial flora to health is still an open question.

In breast-fed infants the *Bacillus bifidus*, a harmless anaerobe, composes almost the entire intestinal bacterial flora, relatively small numbers of other organisms being present. In the bowel of a bottle-fed baby there is present, not only a greater number of organisms, but a greater variety also. The colon bacillus group is the predominating type of organism with many streptococci, staphylococci and other bacilli. This is true even when sterilized cow's milk is used for feeding. These facts explain the greater frequency of gastro-intestinal disturbances in bottle-fed babies.

After the period of infancy the increase in the variety of things eaten, the frequent variations in

1. Ztschr. f. klin. Med., 1902, xlv, 413.

2. Arch. f. Hyg., 1902, xli: quoted by Stengel, Osler's Modern Medicine (1908), v, 337.

3. Ztschr. f. physiol. Chemie, 1895, xxi, 109; abstr. in Schmidt's Jahrb., 1896, ccl, 225.

4. Arch. f. Hyg., 1898, xxxiv, 210; abstr. in Schmidt's Jahrb., 1899, cclix, 8.

the conditions and places of eating, and the acquisition, in adult life particularly, of habits (alcohol, tobacco, tea, coffee) more or less injurious to the digestive apparatus, all serve to produce marked changes in the bacterial flora of the intestines. In general it may be said that, as age advances, the putrefactive bacteria continually increase in numbers until in middle life or old age they come to possess an importance and display an activity unknown in the adolescent period.⁵ This difference in the intestinal bacteria is one very important reason why elderly persons are so easily upset by slight indiscretions in diet.

At all periods of life diet has much to do with the number and kind of micro-organisms in the intestines. Bacteria of all kinds, especially the anaerobic or putrefactive types, are more numerous in the digestive tracts of carnivorous animals and men who eat large quantities of meat than of herbivora and vegetarians. Meat has strong reducing powers; that is, it quickly uses up the free oxygen in the contents of the bowel and thus produces an anaerobic condition favorable to the growth of putrefactive organisms. Meat is also the most suitable pabulum on which these bacteria may thrive and elaborate the products of putrefaction. A diet poor in meat but rich in carbohydrates will give rise to a very different kind of bacterial flora which will be of the fermentative as distinguished from the putrefactive type.

The rapidity with which the products of normal digestion are absorbed also influences the bacterial population of the bowel. When digestion is active and absorption rapid, little pabulum is left for bacteria and their numbers are necessarily reduced on account of insufficient food supply. In constipation, when the food remains in the intestine for a long time, absorption of the nutrient portion is almost complete and the number of bacteria greatly diminished. Thus, Strasburger¹ found that "the quantity of daily bacterial waste, dried, in adults averages under normal conditions 8 grams; . . . in chronic constipation, 5.5 down to 2.6 grams."

There is a very marked variation in the number of bacteria at different levels of the gastro-intestinal tract. During digestion they are present in moderate numbers in the stomach. There are fewer in the duodenum than in the stomach. If we plot a curve to represent their numbers

from the duodenum onward, the curve steadily rises until it reaches its maximum height in the lower ileum and cecum and rather suddenly falls through the colon and rectum. The number in the rectum is remarkably small; the vast majority of those present here and in the feces are dead. Strasburger¹ found that 98 per cent. of the bacteria of the feces were dead. When an animal is starved for several days the curve acquires somewhat different characteristics. Instead of rising steadily from the duodenum, it runs horizontally almost on the line of "No bacteria" until well within the ileum, when it rises very suddenly to its maximum in the vicinity of the ileocecal valve and then subsides just as rapidly. These facts have a very practical bearing in the surgery of the stomach and upper intestines. Cushing and Livingood⁶ found that by starving a dog for twenty-four hours the stomach, duodenum and upper part of the jejunum could be rendered almost sterile. The same is true of patients being prepared for operation. A case in point is one reported by these authors in which a young man was shot in the upper abdomen several hours after a meal. It was an hour or more after the shooting before the abdomen was opened. There were four perforations in the duodenum and upper jejunum and intestinal juices had escaped into the peritoneal cavity. There was no reddening of the peritoneum. The perforations were sutured and the patient recovered without showing any signs of peritonitis. The very great abundance of bacteria always present in the region of the cecum readily explains the serious danger of infections and injuries in the appendiceal region.

It seems almost incredible at first sight that the digestive tract could be rendered so nearly sterile in any part of its course. Every surgeon knows the difficulty of rendering the skin aseptic, because of the fact that bacteria are literally in the skin, among the epithelial cells of the epidermis. The mucous membrane of the intestine is quite in contrast with this. "The researches of Marfan and Barnard⁷ show that only after artificially induced enteritides (e. g., by arsenic) and in pathologic states can bacteria be found occupying the mouths of the mucous glands." It is true that Ravenel,⁸ Calmette⁹ and others have proved that the tubercle bacillus may pass through the intestinal mucosa without leaving any sign of its transit. Adami¹⁰ has shown that the same thing

5. Hertel: The Common Bacterial Infections of the Digestive Tract, etc., Harvey Soc. Lectures, Series 2, 1906-7, pp. 64-79. Rettger (Jour. Biol. Chem., 1906, ii, 83) made "frequent attempts" to observe one or another of the known anaerobes of the putrefactive type in stools from normal persons and anemia patients but met with failure with two exceptions.

6. John Hopkins Hosp. Rep., 1900, ix, 543.

7. La Presse Medicale, 1899, p. 217; quoted by Cushing and Livingood, l. c.

8. Am. Jour. Med. Sc., 1907, cxxxiv, 469.

9. Presse Medicale, 1907, xlv; abstr. in Jour. A. M. A., 1907, xlviii, 553.

10. Jour. Exper. Med., 1899, iv, 362; Brit. Med. Jour., 1898, ii, 1255.

not infrequently, perhaps even habitually, occurs with colon bacilli and other intestinal bacteria. But it seems to be a fact that if bacteria do get into the mucous membrane of the intestine they do not remain there as they do in the skin. Hence it is possible for the upper part of the intestine to become almost completely aseptic when it has become emptied of food and no pabulum remains to sustain bacterial life.

While bacteria in very large numbers are normally present in the gastro-intestinal tract of man, and do not ordinarily cause any trouble, they may easily give rise to local or general pathologic conditions, not only by the appearance among the normal flora of a species truly pathogenic, such as typhoid bacilli, but also by some disturbance in digestion, allowing those habitually present to elaborate toxins in abnormal amounts. The body has, however, a very elaborate protective mechanism both against invasion by the bacteria themselves and against their products absorbed from the intestine. The first of these barriers is the gastric juice. Its bactericidal power has been shown by Macfadyen¹¹ to be due to the hydrochloric acid alone and is therefore limited. In many instances, however, it is quite effective. Many pathogenic organisms cannot live in a medium as highly acid as normal gastric juice. It was first shown by Koch,¹² and later more conclusively by Issaëff and Kolle,¹³ that guinea-pigs to which cholera spirilla were fed did not develop the disease unless carbonate of soda was given at the same time.

The digestive juices in the intestine itself have practically no bactericidal power. The powers inimical to bacteria formerly ascribed to bile have been proved to be largely a myth. The intestine itself is not without protective agencies, however. The rôle of its mucous membrane has already been discussed. The normal intestinal flora, made up largely of colon bacilli, guard their territorial rights very jealously and make the surroundings unpleasant for would-be invaders. *B. coli* and its compatriots are acid formers, and under normal conditions the contents of the lower ileum and cecum are too strongly acid in reaction to furnish favorable soil for other organisms more likely to give trouble to the host. Furthermore, when digestion is healthy and absorption active and rapid, the amount of pabulum left for bacteria is reduced to a minimum and their number is kept down by the limited food supply.

The character of the diet has an important bearing on this point. Certain foods, like milk, pass from the stomach into the intestine so quickly that the gastric juice has no time to act on the bacteria introduced and they reach the intestine in a few minutes after ingestion. Many articles of diet, such as cheese, raw oysters, etc., are especially rich in bacteria and thus introduce large numbers into the digestive system at once.

Toxins are always produced by bacterial growth in the intestines. It is only when they are produced in excessive amounts that they do any serious harm. For between the gastro-intestinal tract and the rest of the body the liver forms a very effective barrier. Even the greater number of bacteria that succeed in getting through the intestinal mucosa are destroyed here. For Adami¹⁰ has described fragments of bacteria in process of destruction within the endothelial cells lining the capillaries of the liver. This organ also serves as a sort of reducing plant for substances absorbed from the intestines. For instance, indol, a produce of proteid putrefaction, in process of absorption is converted into the more soluble indoxyl. The latter is transformed in the liver into the non-toxic indoxyl-potassium-sulphate or indican and as such is excreted in the urine.

A great variety of substances may be produced in the intestine by bacterial activity, depending, as already mentioned, on the type of organisms present, the diet, etc. A few of these substances may be referred to and their chemical properties noted.

Fermentative bacteria produce gases, especially carbon dioxid, and acids, particularly acetic and lactic. The gases give rise to flatulence, and the acids frequently cause more or less severe diarrhea. The production of these substances is, of course, most favored by a diet rich in carbohydrates.

The decomposition of proteids in the intestine by bacteria gives rise to a number of chemically very complex substances. Putrescin and cadaverin are produced in very small quantities, too small perhaps to produce any definite disturbance. These two compounds are formed in putrefying flesh and are in part the source of the horrible odors which it gives off. Certain sulphur compounds, such as methyl mercaptan, are found in small amounts and serve to give the feces in these conditions their extremely unpleasant odor. Phenol and cresol are produced in minute quantities.

Skatol and the more poisonous related compound, indol, are produced in considerable

11. Jour. Anat. and Physiol., 1887, xxi, 227; quoted by Cushing and Livingood, l. c., p. 553.

12. Deutsch. med. Wchnschr., 1884, x, 725.

13. Ztschr. f. Hyg., 1894, xviii, 17.

amounts, especially under certain conditions. When colon bacilli are planted in ordinary broth in the laboratory, they produce indol in their process of growth. Indol possesses distinctly toxic properties. Herter¹⁴ injected small doses into dogs and produced evident intoxication. Moderately large doses given to healthy men by mouth gave rise to decidedly unpleasant symptoms. He concludes from these experiments that "prolonged and excessive indol absorption is capable of causing headache, especially frontal headache, abnormal cephalic sensations and indisposition for mental and physical exertion. The latter condition, if prolonged, may, perhaps, form the basis of a neurasthenia." Indol, after being absorbed, is changed in the body into indican and is excreted as such in the urine. The degree of indicanuria is an indicator of the amount of the putrefaction of proteids in the intestine. Funk¹⁵ systematically tested for indican in the urine of 157 persons suffering with various kinds of pathologic psychoses. He found indicanuria most frequent and most marked in patients with melancholia and depressive mental conditions. Lee¹³ "made a preliminary study of the effects of indol, skatol and methyl mercaptan on muscle and found all of them to possess some degree of fatiguing power."

In many instances it seems possible that cases of ptomaine poisoning may have been due to changes produced in the meat or milk after ingestion instead of before.

While the substances mentioned are, in healthy persons, produced in quantities too small to cause any noticeable disturbances in the body, it must be remembered that in many individuals there is day after day, perhaps for years, the absorption of one or more of these compounds in amounts that are much greater than normal. It is this continuous or cumulative action that produces the permanent pathologic conditions frequently seen. Russell¹⁷ and others have shown that the toxins absorbed from the intestines, circulating in the blood, produce a hypertonus of the blood vessels. This hypertonus, if kept up for a time, ultimately leads to a permanent thickening of the vessel wall, and arteriosclerosis, with all its attendant evils, is added to the patient's troubles.

Cases of intestinal toxemia are usually rather obscure. The symptom-complex is not often clearly defined. Hence it is difficult to get a characteristic clinical picture. Herter,⁵ who has,

perhaps, done more work on this subject than any man in America, describes three types of excessive intestinal putrefaction—the indolic, the saccharo-butyric and the combined types.

The indolic type is characterized chiefly by marked indicanuria and is probably due to members of the *B. coli* group of organisms. "Intestinal distention, weakness, irritability and other nervous manifestations are met with in these cases." The chronic indigestion of marantic children with large abdomens is probably of this type. "This form of excessive intestinal putrefaction is frequently associated with obstruction of the bile duct and pancreatic disease."¹⁸

The saccharo-butyric type is due to the strictly anaerobic, butyric-acid-producing bacteria. "Gaseous distention and intestinal irritation following the use of carbohydrate foods and the passage of light-colored stools of low specific gravity and with great excess of gas are among the clinical indications. This type occurs more frequently in adults than in children and occasions general weakness, various nervous symptoms, and sometimes high grades of anemia approaching the type of pernicious anemia, loss of weight and general loss of vigor are not unusual."¹⁸

The combined type represents a combination of the other two, both etiologically and clinically. It is a mixed infection with the *B. coli* group and anaerobic organisms. Stengel¹⁸ characterizes this type thus: "The distinction largely depends upon the examination of the feces and the association of high grades of indicanuria. Nervous symptoms are likely to appear early and to be conspicuous, and later anemia becomes a striking feature. The patient finally falls into a condition of chronic invalidism."

In the treatment of infections of the digestive tract, prevention is the most important procedure, as it is in all infectious diseases. Prophylaxis should begin with proper care of the mouth and teeth. It should not be surprising to find a person with several carious teeth or with pyorrhea alveolaris suffering from toxemias of intestinal origin. Anaerobic bacteria are found in the cavities of decayed teeth. Passing into the intestine with the food, they find favorable soil for growth and for the elaboration of toxic substances. Miller¹⁹ estimated that there are 1,140,000,000 bacteria in mouths allowed to become foul from lack of care. Of 25 different varieties of bacteria isolated from such mouths, he found 12 in the feces. Van Puteren²⁰ found

14. New York Med. Jour., 1898, lxxviii, 89.

15. Revue de neurologie et psychiatrie, 1907, lv, 225; abstr. Centralbl. f. innere Med., 1908, xxix, 431.

16. Jour. Am. Med. Assn., 1906, xli, 1499.

17. Arterial Hypertonus, Sclerosis and Blood Pressure, Philadelphia, 1908, pp. 89-112.

18. Stengel: Osler's Modern Medicine, v, 337 ff.

19. Arch. f. Exper. Path., 1882, xvi; abstr. in Schmidt's Jahrb., 1886, ccix, 287.

20. Quoted in Nothnagel's Diseases of the Intestines and Peritoneum, English Ed. (1904), p. 40.

that the number of bacteria in the stomach contents of breast-fed babies depends on the number in the mouth. By washing out the mouth with sterile water before and after nursing he was able to greatly reduce the number of bacteria in the stomach contents, and in a small per cent. of cases succeeded in rendering them practically sterile. Proper care of carious teeth and the habitual use of the tooth brush will do much toward preventing intestinal toxemias.

Thorough mastication of food and care of the digestive functions in other ways are also important prophylactic measures. Herter⁵ calls attention to the fact that thorough comminution of the food before eating it will not take the place of proper mastication. Thorough chewing of what is eaten not only brings it into a condition in which the digestive enzymes can more readily act upon it, but, what is equally important, the process by reflex action stimulates the secretion of the digestive juices and digestion is then more rapid and complete. When food is quickly digested and absorbed, little pabulum is left in the intestines for bacteria and they cannot exist in such great numbers and in so many varieties as when digestion is deranged.

In line with this is the exercise of temperance in eating. When the appetite is abnormally stimulated by the use of cocktails and highly spiced sauces, more food is eaten than can be assimilated. The excess can only pass out in the feces, but before it leaves the body it serves as a rich food supply for the intestinal bacteria. These elaborate from this excess the toxins that give rise to arterial hypertonus and arteriosclerosis and the various evidences of intestinal toxemia.

In the treatment of a case of intestinal toxemia attention should first be given to care of the mouth and teeth, the correction of digestive disturbances, and to impressing upon the patient the importance of temperance not only in eating, but in all other things. Proper exercise, sufficient sleep and the avoidance of the use of alcoholics, coffee, tea and tobacco are essential to any degree of permanent success in relieving the condition.

When there is derangement of digestion, this must be corrected. In some cases the administration of dilute hydrochloric acid or of the acid and pepsin to improve the digestive functions temporarily and quickly may be necessary in the beginning. Herter⁵ prefers the use of diastase, as it promotes the digestion of carbohydrates.

The use of cathartics does not necessarily reduce the number of bacteria in the intestines. A mild purge, preferably a saline, should be

given at the beginning of the treatment. But the habitual use of purgatives will injure the mucous membrane of the intestines and thus do more harm than good.

Intestinal antiseptics are, as a rule, unreliable. They not only fail to disinfect the digestive tract, but act as irritants to the intestinal mucosa. Steele²¹ has done an excellent piece of experimental work on the action of the different intestinal antiseptics. With salol and thymol he got no reduction of the number of bacteria in the feces. In some cases he even got an increase. Steele found that beta-naphthol and bismuth salicylate were the only members of the group of intestinal antiseptics that produced any reduction in the number of bacteria in the feces. Friedenwald and Leitz²² repeated Steele's experiment and came to identical conclusions. Occasionally some slowly oxidizing substance like manganese dioxid will liberate enough oxygen in the large intestine to materially reduce the number of anaerobes.

More important than administration of medicine in these cases is the proper regulation of the diet. Foods that are readily digested and quickly absorbed should be taken in moderate amounts. Milk is, as a rule, the best article of diet for patients of this kind. Buttermilk, koumyss and similar fermented milk products frequently prove particularly beneficial because they carry with them large numbers of harmless acid-forming bacteria that often produce marked changes in the bacterial flora of the intestine. Furthermore, milk does not readily undergo putrefactive changes as do other proteid foods. Meat in large quantities should be carefully avoided. As already stated, meat has strong reducing powers, quickly uses up all the available oxygen in the intestinal contents and, in addition, serves as the best pabulum for the anaerobic, putrefactive bacteria. In the saccharo-butyric type, in which carbohydrates seem to be badly borne, this class of foods should be reduced to a minimum.

To summarize, it has been shown above that the gastro-intestinal tract normally contains large numbers and many varieties of bacteria; that the number and variety vary with age, diet, efficiency of digestion and rapidity of absorption, the part of the intestine, and the time since the last meal; that toxemia results when conditions arise which permit these organisms to produce toxins in abnormal amounts; and that the treatment of toxemias of intestinal origin should be directed to care of the mouth and teeth, correction of digestive disturbances and regulation of the diet rather than to the administration of drugs.

21. Jour. Am. Med. Assn., 1907, xlix, 647.

22. Am. Jour. Med. Sc., 1909, cxxxviii, 683.

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EDITORIALS**RECENT ADVANCES IN THE TREATMENT OF NEPHROLITHIASIS.**

But few problems in the field of surgery to-day present the marked advance that has characterized the surgical treatment of renal and ureteral calculi. That such progress is, in the main, due to the more recent refinements of diagnosis, is well illustrated in an article on the subject, in the April number of *Surgery, Gynecology and Obstetrics*, by D. N. Eisendrath.

The author has confined his attention principally to four points, viz., the value of radiography in the diagnosis of renal calculi; the relative frequency of bilateral calculi and their relation to calculous anuria; the importance of the newer work in the surgical anatomy of the kidney; the choice of operation for removal of renal calculus, *i. e.*, pyelotomy, nephrotomy or nephrectomy.

Regarding the first point, emphasis is laid upon the fact that Kummel's former dictum of "no shadow, no stone," while too radical for past experience, is now a practical working hypothesis. This is due not alone to the improvements in apparatus, such as the Albers Schönberg compression diaphragm, more powerful and penetrating light with consequent diminution of time of exposure, etc., but also to the fact that far greater skill and experience at the hands of expert radiographers are to-day available. And the essayist insists that the skiagram should be made by such a one, in order to be of maximum results. The proportion of the findings (*i. e.*, shadow present and calculus found at operation) is so large at the present time, that the author, and most experienced operators of to-day agree with him, believes Kummel's stand not an exaggerated one. Although mentioning the possible exception of uric acid stones as either showing very faintly or not at all, yet not much emphasis is laid upon this feature, in the article. The fact is that there is an honest difference of opinion among radiographers of to-day as to their ability to show uric acid stones. Kummel's position has

been stated. Williams, on the other hand, claims that it is impossible to detect pure uric acid calculi, while Cole of New York takes an intermediary stand but inclines toward Kummel's view that it is possible to show any stone of whatever size or chemical composition. The relative frequency of pure uric acid calculi, though variously estimated at from one-half to three-quarters of all varieties found in the kidney, is shown by Watson's collection of 52 uric acid stones in 253 calculi to be much less. Indeed, Keyes declares that pure uric acid stones are extremely rare, renal calculi consisting chiefly of this material nearly always being either intermingled with calcium oxalate or else coated with the phosphates. He believes that a thoroughly competent radiographer will render a correct diagnosis as to the presence or absence of stones in 95 per cent. of all cases. Leonard asserts that the margin of error should be less than 3 per cent. An important point mentioned by Eisendrath is that both kidneys and both ureters should be included in every case radiographed. It would seem almost unnecessary to state that any radiographer of experience will see that his patient is properly prepared, will have the proper means of examination of plates at hand, such as the light box, and that he should be better able to interpret his own plates than any one else.

That bilateral calculi are more common than we have been wont to believe is well supported by the more accurate data that have recently been acquired on this point. In 101 cases of renal calculi, Kummel found them present on both sides in 16 cases, nearly 16 per cent. Israel found bilateral calculi in 27 per cent. of his cases. Kapsammer and Watson each in 30 per cent. of the cases collected. Such a showing should put the surgeon on his guard, lest a supposed reflex anuria of the opposite side after a nephrectomy should in reality be due to an unrecognized bilateral stone lesion. Indeed the author believes that many cases of calculous anuria will, in the future, be found to be due to this cause.

The recent advances in the study of the surgical anatomy of the kidney are along the lines of abnormalities of form, development and position of the organ and anomalies of the vessels, pelvis and ureters. Thus there may be a solitary kidney, a horseshoe or fused kidney, a kidney hypoplasia, or a dystopia or congenital displacement of the organ. This lack of recognition of an accessory renal artery may lead to no little embarrassment and to such serious hemorrhage as to make it advisable in every nephrectomy to look

for such abnormality. The presence of a ramifying pelvis, which is indeed the commoner type, may necessitate a nephrotomy in addition to pyelotomy to make sure that all stones have been extracted. Likewise by remembering that the renal artery and vein lie on the anterior aspect of the pelvis, a retropelvic branch of the artery arching across the upper border of the pelvis, one is able to make a posterior pyelotomy with little or no resulting hemorrhage.

The diagnosis, then, of renal calculi having been confirmed by a reliable radiograph, it remains for the surgeon to choose between a conservative pyelotomy or nephrotomy and the more radical nephrectomy. No careful surgeon of today would be willing to remove a kidney unless he had reason to believe that a practically normal, functioning kidney remains on the opposite side. The phloridzin test having been recently proven to be fallacious comparatively often, and the indigo-carmin test of but relative value, the most reliable data at present are to be obtained only by a careful chemical and microscopic examination of the separate urines of each kidney obtained by the ureteral catheter. As between a pyelotomy and a nephrotomy, the former operation is indicated only in aseptic kidneys, where the stone is located at the outlet of the pelvis or occasionally in the interior primary division of the pelvis. Nephrotomy should be performed where the calculus is branched or where multiple calculi are scattered throughout the kidney. The hemorrhage from a nephrotomy is best controlled by compression either digital or by clamp or rubber constrictor on the renal vessels. If bilateral calculi be present the operations had best be done at two sittings, being sure that the obstructed ureter is freed of stones so as to prevent calculus anuria. The chief points to be considered in determining for or against a nephrectomy are the condition of the opposite kidney, the extent of suppuration or other destructive lesion of the diseased kidney and the degree of menace to the patient's general health involved in the retention of the organ.

So that the modern, conservative, surgical treatment of nephrolithiasis by no means ends with a consideration of the pathology of the single organ under suspicion but involves, more than ever, a careful measure of the patient's general condition, the physiology and possible pathology of the opposite kidney as well as a familiarity with the anatomical and pathologic alterations that may be present in the organ to be operated on.

PROGRESS IN THE TREATMENT OF GONORRHEA.

It is doubtful if anywhere in the realm of medicine there exists a disease whose treatment has, to the conscientious therapist, been more unsatisfactory or more barren of end results, than the treatment of gonorrheal urethritis. So universal is this verdict among clinicians of the widest experience that one is almost skeptical when even so eminent an authority as Dr. L. Bolton Bangs puts himself on record as believing that we actually are making progress in our treatment of the disease, conservative though his statements are. In an article on the subject in the May number of the *American Journal of Medical Sciences*, Dr. Bangs states that he believes our progress has been along four lines, viz., that the sufferings of the first week can now be mitigated; that there is less liability to posterior urethritis and inflammation of the contiguous structures; that there is less tendency toward chronicity and stricture formation; and that by virtue of wider dissemination of knowledge among the laity concerning the disease, our patients pay more attention to the treatment.

It is well recognized that the disease is positively increasing in frequency, in fact to what Morrow, Julianne, and others believe to be an "alarming" extent. Indeed, Morrow says that it is a conservative estimate that fully one-eighth of all human disease and suffering comes from this source; that 15 per cent. of all special surgical operations performed on women are due to gonorrhea; that 50 per cent. or more of all women infected with the disease are rendered absolutely and irremediably sterile, and many are condemned to lifelong invalidism; that 15 to 25 per cent. of all blindness is due to the same infection. Owing to the ophthalmia neonatorum crusade, there is some improvement, latterly, to be noted in the morbidity from this cause.

In order to arrive at conclusive data bearing on the question of whether or not we are gaining on gonorrhea, Bangs quotes extensively from genitourinary authorities. From his own experience the author is led to believe that although the majority of cases do last from four to six weeks, yet a greater number than formerly terminate in two or three weeks. But this is not the consensus of opinion of the authorities quoted. Among these are Watson and Cunningham, Taylor, White and Martin, Greene and Brooks, Hyde and Montgomery, Morton, Finger and Casper, and both of the Keyes. All of these save the last named are unanimous in the opinion that in the vast majority of cases the longer period is required, while the Keyes' are sufficiently optimistic

to state that the disease is curable in two to three weeks by the irrigation method. That Keyes, Jr., has, within the space of time elapsing between the 1903 edition of the volume issued by his father and himself, and his own edition but just published, radically modified his views on the value of the irrigation method, is very apparent on a perusal of the late work. In fact, he now states that he can only raise his voice in protest, with Horwitz, against the early use of permanganate irrigations which he thinks may be of value in the terminal stage of an acute gonorrhea but even then seem to predispose to a posterior infection.

As to the mitigation of symptoms, Bangs states from his own experience that prompt treatment by one of the albuminoid silver preparations along with rigid hygienic measures, will reduce the activity of the infection, partly subdue the inflammatory symptoms and possibly modify the whole course of the attack.

Regarding the complications of gonorrhea, it is impossible to show by the literature whether they were any more prevalent under the older methods than at present. The joint testimony of several authors is that from 80 to 90 per cent. of gonorrheal patients develop posterior urethritis. Epididymitis complicating gonorrhea is variously estimated in its frequency at from 3 to 30 per cent., spermatocystitis from 6 to 35 per cent. and prostatitis from 60 to 90 per cent. of all cases of gonorrhea. From the study of 1,000 cases of gonorrhea by Lewin and Bohn it may be deduced that if posterior urethritis can be prevented, complications hardly occur, and that early recognition and treatment of spermatocystitis will prevent epididymitis.

Finally, then, in the consideration of the question of treatment, the greatest advance to be noted is the effort toward its simplification, fewer remedies and a more expert procedure being utilized. Our more exact knowledge of the bacteriology and pathology of the disease has served to eliminate the confusion of thirty years ago. In spite of this, however, and no matter what the form of treatment, Nature takes her own time to repair the damage wrought by the infection and the average duration remains from four to six weeks. This unalterable prognosis seems to the author to point the way to an unirritating form of treatment, that is best adapted to the indications as they arise. In 1876 J. L. Milton wrote of 63 remedies used by urethral injection, some of which marvellously cured in from one to four days, failing in only two out of 64 cases. To-day these have been narrowed down to the silver preparations, potassium permanganate and

the astringent remedies, zinc and lead. Methods are to-day also being simplified. For instance, seven years ago Keyes declared that Chetwood's modification of the Janet method of irrigation had given results never before obtained in thirty-five years of practice. To-day, as indicated above, young Keyes says of the method, that while universally employed ten years ago, it has now quite fallen into disrepute. Taylor, Marshall, Hyde and Montgomery all prefer injections to irrigations, particularly in the earlier cases. Fuller believes that irrigations cause spermatocystitis. Morton and Lydston each deprecate the time and expense attendant upon the irrigation treatment, and the latter author believes that proper injections prevent strictures and complications. Von Zeissl, like Finger, is somewhat pessimistic and quotes Ricord to the effect that nobody knows when gonorrhea will end. Indeed, he believes with Astley Cooper that "in many cases, despite all remedies, the malady lasts so long that it is a reproach to our art." Also he laments that the discovery of the gonococcus has not helped us in the treatment and declares that modern antiseptics give him no better results than the older remedies. Finger finds our modern resources not new and Streiff points out that irrigation dates back to 1839.

The author's experience, based on a series of observations at the City Hospital of New York, the Vanderbilt Clinic and the Outdoor Department of Roosevelt Hospital, led him to conclude that not only did the irrigation method not readily control the symptoms, but was even apt to aggravate them, and that posterior urethritis, as well as other complications, was more common with its employment than by the use of injections of the silver salts. Even in chronic states Bangs would only occasionally resort to irrigations.

An important sign of the times is that the delicate human urethra is looked upon with much greater respect than formerly, and with our better knowledge of the possible complications not only to the patient but to innocent persons, we are led to a more sympathetic, more rational and more careful technic in our therapy of this all too common disease.

And, in conclusion, what is probably more important than any of the points dilated upon by the author, is the fact that, more than all other therapeutic refinements combined, the prophylactic treatment of gonorrhea through the education of the public is destined to be our keenest weapon in the fight and the one upon which the most reliance should be placed in the effort to wipe out the "great black plague."

THE PROPOSED DEPARTMENT OF PUBLIC HEALTH.

Senator Robert L. Owen of Oklahoma has introduced a bill in the United States Senate to organize all existing national health agencies, with enlarged functions, into a single department of the government, to be known as the department of health, in charge of the Secretary of Health.

This is one of the most important measures which has ever come before Congress for consideration, and the medical profession of the country should take active steps to influence all members of congress to support the measure. Never in the history of the country has anything been proposed which so vitally concerns the humane as well as the economic conditions of the general public. Municipal, county and state boards of health have accomplished much in the way of preventive medicine and sanitation, but the government can accomplish much more in efforts to conserve human health as a means of preserving human life, efficiency and happiness. The subject is of sufficient importance and dignity to warrant the establishment of a distinct department of health rather than a bureau of health which we have at present but which is subordinate to other departments and hence lacking in efficiency and breadth of work.

It is fortunate that a man of Senator Owen's standing has taken up this question, and it is particularly gratifying to know that his bill was not prompted either by the American Medical Association or the great lay movement represented by the Committee of One Hundred, the two organizations that have come to be recognized as the natural sponsors of all manifestos of health legislation. Senator Owen has prepared and will send to any interested person a mass of statistics and other information which are exceedingly interesting as showing what can be accomplished by a department of health through an increase in the scope and efficiency of efforts that are now being put forth to conserve public health. He also gives figures to show the economic gain which in reality is the one feature which most often appeals to the people.

In support of the measure, which is of such prime importance for the welfare of the people, so long advocated by the entire medical profession, physicians are asked to give their unreserved cooperation in this movement. As stated by the Chairman of the Bureau of Medical Legislation of the A. M. A., we have now entered upon the most important campaign in the interests of the people ever waged in the history of the United States. Every county in every state is expected

to exert its full share of influence. Every county medical society is supposed to have an auxiliary legislative committee of the American Medical Association, and this committee should take the initiative. In a circular sent out by the American Medical Association, the members of such auxiliary committees are requested to at once do three things: "1. Write a letter giving your own views and the views dominant in your community on the question of public health legislation, and send a copy of it to (a) each of your United States Senators, and (b) to your congressman. 2. Secure letters expressing approval of the principle of Senator Owen's bill from each of at least three citizens of recognized political influence, not members of the medical profession, such letters to be sent to (a) each of your United States Senators, and (b) to your congressman. 3. Arrange for a public meeting to be held preferably under the auspices of your commercial or civic bodies, with the cooperation of your county medical society, at which after full discussion of the question, have resolutions adopted expressive of the sense of the meeting, as to the importance of the proposed legislation and the necessity for its prompt enactment. Copies of the resolutions adopted, properly signed, should be sent without delay to (a) each of your United States Senators and (b) to your congressman. Similar action should be initiated at any and every meeting of a public character, civic, educational, political or religious, held in your county until the bill becomes a law. The secretary of the Board of Medical Legislation of the American Medical Association, 535 Dearborn avenue, Chicago, should be advised at once of each step that you take, including copies of any resolutions adopted or any replies that you may receive from your letters to Washington."

EDITORIAL NOTES

REMEMBER that the railroads offer reduced rates for all those who attend the St. Louis session of the A. M. A.

The committee on arrangements for the next session of the Indiana State Medical Association is hard at work and it will not be the fault of the committee if the Fort Wayne session is not the largest ever held by the State Association. The visitors are to be entertained royally and a special effort will be made to bring out a large attendance of members and their wives.

THERE is no reason why the Indiana medical profession should not be well represented at the St. Louis session of the American Medical Association, held June 7 to 10. Indiana is always represented, but when the Association is held as near as St. Louis the attendance from this state should be unusually large. The programs offer a fine scientific treat, and the local profession of St. Louis have arranged for sufficient social entertainment to please all tastes.

THE Indianapolis Medical Society, at the meeting to be held on May 31, will discuss the question of state control and treatment of inebriety and drug addiction. Judge James A. Collins, of Indianapolis will discuss the legal and judicial phases of the question, and Dr. F. W. Terflinger, of Logansport, will discuss the medical side of the question. The meeting is a very important one and should be attended by all members of the committees on inebriety, and public policy and legislation of the Indiana State Medical Association. The general profession of the state is also invited to attend the meeting and take part in the discussion.

Attention is called to the announcement of the program committee of the Indiana State Medical Association concerning the number of papers to be accepted for the program for the Fort Wayne session. The committee has very wisely limited the number of papers for each meeting (half day) of each section to five, and papers will be accepted according to merit, with due regard to geographical distribution, the aim being to have all parts of the state represented. The completed paper must be in the hands of the committee not later than June 30, and each essayist will be required to furnish an abstract for publication in the official program.

We desire to call the attention of secretaries of medical societies to the fact that our society directories for the county and district societies will not be accurate unless we have the cooperation of the secretaries in furnishing information concerning dates of meetings and changes in the list of officers. We have sent out blanks to be filled in with medical society announcements and returned to us for publication in *THE JOURNAL*, but up to the present time but few secretaries have shown us the courtesy of supplying the required information. We have no hesitation in saying that secretaries who are too lazy to fill in the blanks with such information as we desire, and mail the same to us, ought to be replaced by

a secretary who has enough interest in his local society to warrant him in supplying the information which we ask. For the benefit of some members of county societies who may be under the impression that the officers of their societies are active we are going to publish a list of the county societies from which we have failed to receive reports, notwithstanding the fact that we have made a request and even furnished the postage for such reports.

This year's session of the American Medical Association will be held in St. Louis, June 7 to 10, 1910. The Central Passenger Association, which includes all railroad lines operating in Indiana, will make a rate of one fare and a half for the round trip, tickets to be sold June 4 to 8 inclusive. The return limit is June 20, with provision for extension to July 20 if ticket is deposited with the joint agent at St. Louis and a deposit fee of one dollar paid by the passenger.

The St. Louis committee on arrangements announces that the section meeting places are located on Grand avenue and streets intersecting Grand avenue. All of the section meeting places are within easy walking distance of each other, and special attention has been given to the grouping of correlated sections. The registration bureau, the commercial and scientific exhibits, and the postoffice will be located in the Coliseum.

The street car facilities are excellent, the cars running at two or three minute intervals, and arrangements have been made for special service when the members will be traveling in large bodies at any particular hour. Taxicabs will also be at hand, and a special rate will be made for transporting the members from the Coliseum, where the registration bureau will be established, to the Grand avenue district, where the section meetings will be held.

The committee on arrangements assures the members of the Association that the weather in the early days of June is delightful in St. Louis. There need be no fear of extreme heat in St. Louis during the period of the session. The committee has provided social features for every day of the session and it is expected that the entertainment will prove equal to any entertainment afforded at previous sessions of the Association.

The various sections announce interesting programs and everything points to a large attendance. The hotel accommodations and the accommodations afforded by boarding houses and private residences are ample to take care of all that go to St. Louis.

IN THIS number of *THE JOURNAL* we print the list of members of the Indiana State Medical Association. As usual many physicians who desire to continue membership in the Association have failed to pay their dues and therefore their names do not appear in the list of members. Many of these men complain to us because they do not receive *THE JOURNAL* regularly, and rather indignantly assert that they should receive *THE JOURNAL* because they are members of the Association. When asked to produce their membership cards they are obliged to admit that they have not paid their dues, and in accordance with the provisions of the constitution are no longer members of the State Association and hence not entitled to any of the benefits. It would be well for these physicians who procrastinate in the payment of dues to remember that repeated notices concerning the time when dues are payable are published in *THE JOURNAL*, and usually county secretaries also send out notices. There is, therefore, no reasonable excuse why the payment of dues should not be made on time.

We also desire to remind the medical profession that the non-payment of state association dues makes it incumbent upon the American Medical Association to refuse membership in that organization until after the state association dues have been paid. One Indiana physician who boasted that all he cared for was membership in the A. M. A., and that he would pay his state association dues when he got ready, received a rather severe jolt a few weeks ago when he was notified that he had been dropped from the membership of the A. M. A. until after he could furnish evidence that he had paid his state association dues. It should be remembered that membership in the A. M. A. is entirely contingent upon membership in the State Association of the state in which the applicant lives, and whenever the physician ceases to be a member of his state association, that minute he also ceases to be a member of the American Medical Association, and any dues that have been paid in advance to the A. M. A. are returned to him.

Dr. J. N. HURTY, secretary of the State Board of Health, says that the next legislature of Indiana will pass a medical inspection bill. The people wish such a bill to become a law and he has received assurance from nominees in both parties that if elected they will favor the enactment of the proposed law.

Dr. H. E. Barnard, state food and drug commissioner, is having prepared a bill providing the State Board with the power to enforce the

Weights and Measures law of 1905. As the law now stands its enforcement has been left to the citizens and prosecuting attorney, with the result that little attention has been paid to it, and it is shown by a recent investigation that sundry food-stuff dealers have been selling foods at short weights. The proposed law provides that the inspectors employed by the Food and Drug Department of the Board shall prosecute for short weights as they now prosecute for food adulterations.

These two proposed measures deserve to be passed by the next legislature of Indiana and an effort should be made to secure the support of the nominees in both of the leading parties.

The medical inspection of schools is an established feature in many states and has been found of unquestionable value in lowering the morbidity and mortality rate among children and young adults. It has also been proved to be a great benefit in raising the standard of mentality among a certain class of school children who before the adoption of medical inspection were the victims of diseased or unhygienic conditions which had a deteriorating effect upon mentality.

The enforcement of the Weights and Measures Act is a matter of economic necessity in order to protect people from the petty stealing which has now become almost general among a large class of storekeepers through the means of short weight and short measure. From time to time it has been observed in some of the large cities of Indiana that merchants were giving short weight, and quite recently one of the leading grocers of Fort Wayne said that the practice of giving short weight had now reached the point where an honest grocery man has difficulty in competing with short weight merchants, who have bargain prices to catch the trade and make up what is lost in prices by giving short weight. The Board of Health deserves support in its efforts to stamp out this dishonest practice.

The United States Civil Service Commission announces an examination on June 1, 1910, to secure eligibles from which to make certification to fill a vacancy in the position of physician in the Indian service, Pine Ridge Agency, South Dakota, and vacancies requiring similar qualifications as they may occur in any branch of the service, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer or promotion. In Indiana the examinations will be held at Bloomington, Evansville, Fort Wayne, Indianapolis, Lafayette, New Albany, Terre Haute and Valparaiso. Applicants

must be between the ages of 20 and 40 years on the date of the examination, and furnish a physician's certificate showing that they are in good health and free from tuberculosis in any form. Applicants must be citizens of the United States, and application for examination should be made to the boards of pension examining surgeons located at the places mentioned. The position pays \$1,000 per annum, and quarters.

At the same places on June 15, 1910, an examination will be held for the purpose of securing eligibles from which to make certification to fill at least two vacancies in the position of medical interne, government hospital for the insane, Washington, D. C., at \$600 per annum each, with maintenance, and vacancies requiring similar qualifications as they may occur in that hospital.

In the circulars sent out by the Commission the statement is made that considerable difficulty has been experienced in filling vacancies, and qualified persons are urged to enter this examination. We might suggest if the Commission desires to overcome the difficulty that has been experienced, a satisfactory way to do it would be to raise the salaries. The Government is exacting in its requirements for the service, and it is also exacting in the service, but apparently is not willing to pay suitable salaries, and herein lies the difficulty in filling vacancies that from time to time arise. Many of the places are away from centers of population, and where the surroundings are anything but pleasant. Then, too, while the Government states that the salaries include maintenance, it must be remembered that those who fill the positions find it necessary to spend considerable sums which might properly come under the head of the cost of living; so that in the end but little can be saved as a direct result of the service. The experience gained is valuable, but it is a question if it is sufficiently valuable to offset the many disadvantages attending service of this kind.

DEATHS

CATHERINE ELLIOTT SHARRER, wife of Dr. W. F. Sharrer, of Delphi, died April 25, from chronic gastric ulcer.

DR. G. C. PURDUE, a former resident of Evansville, died in New York city, where he had gone from his home in Wichita, Kansas, for an operation.

DR. H. C. HOBBS, of Salem, Ind., died at his home, April 20, from kidney trouble. He was born in Oskaloosa, Iowa, December 21, 1849. He was a member of the pension board for many years.

NEWS, NOTES AND COMMENTS

TERRE HAUTE is reported as having a severe epidemic of measles.

DR. BURTON D. MYERS, Bloomington, started for Europe, March 19.

DR. WILLIAM D. SCHWARTZ, Portland, has been appointed secretary of the board of health.

DR. FRANK F. HUTCHINS, of Indianapolis, has gone to Europe for the study of nervous diseases.

DR. S. J. YOUNG, of Valparaiso, is planning a trip abroad this summer with the idea of taking clinical work.

DR. HARRY C. SHARP, of Indianapolis, has been elected medical director of the Central Casualty Company.

ELZA W. BURRIS, M.D., and Mrs. Nellie G. Stout, both of Indianapolis, were united in marriage April 20.

DR. R. H. RITTER, of Indianapolis, has been elected Medical Director of the Meridian Life and Trust Company.

DR. H. R. VANDIVER, of Clay City, suffered the loss of his office and the entire brick business block, by fire, April.

DR. LUTHER WILLIAMS, class of 1897, Indiana Medical College, has moved his office from Coatsville to Indianapolis.

DR. E. H. COWAN and wife, of Crawfordsville, have recently returned from a two months' visit in southern California.

ABRAHAM HUNTSINGER, M.D., of Mishawaka, and Miss Ida Phoebe Piper, of Rockfield, were united in marriage April 6.

THE physicians of Bartholomew county have organized a mutual protective association to insure better collections.

DR. O. P. MERCER, Reelsville, has been appointed surgeon for the Vandalia Railroad, with headquarters at Indianapolis.

DR. ZACH LAUGHLIN, who has been in the Government service in the Philippines, will spend a portion of the summer in Indiana.

DRS. W. N. SHARPE, HARVEY A. MOORE, and E. O. LINDENMUTH, all of Indianapolis, have returned from a sojourn in Florida.

DR. C. R. VICKERY, formerly of Valparaiso, after two years of study and travel abroad, will begin practice in South Bend, in May.

DR. HOMER H. WHEELER, of Indianapolis, will visit the Mayo clinic at Rochester, Minnesota, for three weeks during the latter part of May.

SINCE May 1, Dr. Paul J. Barcus, of Crawfordsville, is limiting his practice to general and abdominal surgery and diseases of women.

DR. CHARLES E. FERGUSON and wife, of Indianapolis, are in Europe for the summer, Dr. Ferguson taking a post-graduate course there.

DR. P. H. VEACH, of Staunton, received the unanimous nomination of his party for representative from Clay County in the next General Assembly.

DR. E. T. ZARING, formerly of Westphalia, has recently become associated with Dr. F. E. Wiedemann, at 1029 North Eighth Street, Terre Haute, Indiana.

DR. T. EARHART, of the Ancon Hospital, Panama, has been visiting in Indianapolis recently. Dr. Earhart has recently been promoted in the Government service.

DRS. M. H. YOUNG, of Harmony, and G. M. PELL, of Carbon, with their families, spent the month of April visiting in southern California, Arizona and Colorado.

DR. MAX C. HAWLEY, who was formerly an interne at the Indianapolis City Dispensary, has accepted the superintendency of the Illinois Insane Hospital at Kankakee, Illinois.

DR. CHARLES L. THOMAS, Logansport, has sued an automobile company for \$50,000 damages for injuries received while riding in a car being demonstrated by the defendant company.

DR. HERBERT WAGNER has returned from his post graduate course in Berlin and has entered the office of his father in the Odd Fellow's Block, Indianapolis, for the practice of surgery.

DRS. JOHN F. BARNHILL and L. C. CLINE, of Indianapolis, attended the national meeting of the Otological and Laryngological Society at Washington, D. C., the last week in April.

DR. JAMES Y. WELBORN, Evansville, president of the Vanderburg County Anti-tuberculosis Society, announces a donation of \$5,000 to the association, provided that \$5,000 additional be raised in membership fees or by subscription.

IN THE case of Mrs. William H. Miers against Dr. George S. Crawford, Milford, for alleged malpractice, a jury in Shelby circuit court, on April 14, returned a verdict in favor of Dr. Crawford.

DRS. JOHN KENNEDY, H. B. COX, E. J. CRIPE, and R. A. TERRY, all of the Indiana University School of Medicine, have been appointed internes of the Protestant Deaconess Hospital, Indianapolis.

DRS. A. L. THURSTON, of Summitville; E. M. SHANK, of Kokomo, and H. S. MURAT, of Madison, Indiana, have been chosen as internes by St. Vincent's Hospital, Indianapolis, for the succeeding year.

DR. J. N. HURTY, secretary of the State Board of Health, was successfully operated on at the Deaconess Hospital, Indianapolis, for appendicitis, April 26. Dr. Hurty's many friends hope for his early recovery.

PETER RUBY, New Albany, aged 45, who had his stomach removed four years ago and had been fed through a fistula since that time, died from starvation April 19. The case had been reported in various medical journals.

DR. C. W. DOWDEN, Medical Director at the West Baden Springs Hotel, Indiana, will sail June 1 to take a post-graduate course in Berlin. Mrs. Dowden will accompany him. Dr. Harry C. Sharp, of Indianapolis, will take charge of Dr. Dowden's work in his absence.

DR. JOSEPH P. SEALE, health officer of Fairmount, has notified the undertakers of the city that in the future when they take charge of a body where death is due to tuberculosis, the house must be correctly fumigated following the funeral, in accordance with the state law.

THE following program was announced for the April meeting of the LaPorte County Medical Society: "LaGrippe," by Dr. L. A. Wilson; "Further Observations on the Milk Question," by Dr. Bo. Howell; and "Diagnosis and Some Effects of Gall-Bladder Infection," Dr. F. V. Martin.

THE YOUNGER PHYSICIANS CLUB, of Indianapolis, had a smoker social at the Commercial Club, Friday evening, April 22, 1910. Mr. J. C. Day delivered an address on "Does Personality Depend Upon Brain?" which was followed by a minstrel performance by the "Colored Jubilee Singers."

THE American Proctologic Society will hold its twelfth annual meeting at St. Louis, June 6 and 7. A program of twenty-nine papers has been prepared and it is expected that the attendance will be satisfactory owing to the fact that the meeting is held on the two days previous to the meeting of the American Medical Association.

DR. G. W. H. KEMPER calls attention to the fact that since 1898, Dr. Wilson Lockhart, who was president of the Indiana State Medical Association in 1866, has been reported in the State Transactions as dead. How this report first started is unknown. The American Medical Directory reports Dr. Wilson Lockhart at Seattle, Washington, office in Marion building.

MEMBERS of the medical profession who have been having difficulty in procuring shoes for the lame will be interested in knowing that some of the surgical instrument houses have added this branch to their orthopedic department. Messrs. Sharp & Smith are sending out announcements to this effect and in all probability some other

instrument dealers will also take up this branch of orthopedic work.

DURING March, eighteen successful and three unsuccessful prosecutions were instituted by the State Pure Food and Drug Commissioner against food dealers, and in the eighteen successful cases the defendants were fined each \$10 and costs. During the month 918 places where food is prepared or sold were inspected. Of these 25 were reported excellent; 445 good; 360 fair; 74 poor and 14 bad.

THE STATE BOARD OF HEALTH has made a ruling that the pure food laws must be conformed to in the strictest sense of the letter. The order specifies that beginning with July 1, bread shall be protected by suitable wrapping paper or be placed in bags before being taken from the bake-shops, and that all other goods from bakeries shall be carried in tight, dust-proof boxes or cartons. The order applying to butchers and wholesale meat dealers went into effect on May 15, and is as stringent as the one governing bakeries.

SOCIETY PROCEEDINGS

THIRTEENTH DISTRICT MEDICAL SOCIETY

The society held its semi-annual session at Goshen on the 26th of April. In the afternoon session the following papers were read: "Artificial Feeding of Infants," by C. L. Slonaker, Leiter's Ford; "Melancholia," by T. J. Shackelford, Warsaw; "A Review of the Present Methods of Intestinal Repair," by A. C. Yoder, Goshen; "Adenoids," by H. P. Preston, Plymouth; "Diphtheria," by G. W. Thompson, Winamac; "Aene Vulgaris," by R. C. Shanklin, South Bend. The attendance was the largest in the history of the society, and the interest in both the afternoon and evening session was continuous and appreciative. The success of the meeting was largely due to the fact that every man who was down on the program for a paper or a toast was there with his work well thought out.

Among those who entered into the discussion were Drs. R. C. Stevens, Wm. Kelsey, Jas. A. Work, Charles Stoltz, A. J. Snapp, I. J. Becknell, H. T. Montgomery, D. L. Miller, C. W. Haywood, E. E. Ash, C. A. Daugherty, C. C. Terry, F. J. Young, J. B. Porter, Henry W. Eby, A. C. McDonald, E. J. Lent.

The society had the good fortune to have with them our state president, Dr. T. C. Kennedy, who made a short address on the subject of medical organization, particularly urging the members to be present at the Fort Wayne meeting in September.

After the banquet the following toasts were given: "The Doctor in Politics," by C. E. Thomas, Leesburg; "The New Things," by H. M. Miller, South Bend; "Is It Always Best to Tell the Truth?" by C. W. Frink, Elkhart; "Why Is the Country Doctor?" by C. C. DuBois, Warsaw; "The Doctor and the Automobile," by J. W. Hill, South Bend. The toasts were well rendered and with the happy assistance of an able toast-

master in the person of J. B. Berteling of South Bend. The evening session was fraught with good feeling and wholesome laughter with keen attention to the serious parts of the subjects handled.

The society accepted the invitation of the Fulton County Medical Society to hold the fall meeting at Rochester.

C. NORMAN HOWARD, Secretary.

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of March 29, 1910.)

Society met in regular session in the assembly room, with twenty-four members present. Dr. Porter reported a case of carcinoma of breast, which was interesting on account of large amount of destruction and small amount of glandular involvement; and on account of the small amount of involvement of chest wall. Operation: Large incision, amputating breast and removing axillary glands. Incision included the serrate muscle of the back. Microscopic diagnosis as yet is not satisfactory, inflammatory tissue predominating.

Recurrent Vomiting in Children was the title of a paper by Dr. Chas. G. Beall, in which he said that large doses of alkalis are of great service.

Dr. Porter said there is no functional vomiting, but must be pathologic. He made motion that Dr. Beall's paper be referred to committee who select papers for the State Association. Carried.

Hemorrhagic Disease of the Newly Born was the title of a paper by Dr. B. P. Weaver, in which he referred to observations on this subject in various lying-in hospitals. Infection seems to play a great part in this condition. He gave symptomatology as summarized by Holt, and spoke on calcium salts, gelatin and blood in treatment, bringing out the idea to increase the coagulability of the blood. In the author's opinion direct transfusion of human blood is the most scientific and rational method of controlling the bleeding. He gave reports of three cases.

Discussion by Drs. Barnett, Beall, Stemen, J. M. Dinnen, Greenwell, Porter, J. F. Dinnen and B. P. Weaver. Motion made and carried that Dr. Weaver's paper be referred to committee on program of the State Association.

The following Committee on Ophthalmia Neonatorum was appointed by the president: Drs. K. K. Wheelock, Albert E. Bulson, Jr., S. H. Havice, J. H. Ranke, R. P. White, H. E. Glock and A. F. Phillips.

Adjourned. J. C. WALLACE, Secretary.

(Meeting of April 5, 1910.)

Society met in regular session in the assembly room, with twenty-four members present. Dr. Wheelock reported two eye cases to show that defects of vision should not be passed over lightly with diagnosis of cataract, as the condition is not always due to cataract. Case 1.—Blindness in old lady; hemorrhages around macula; was suffering from arteriosclerosis. No tortuosity of arteries in eye. Reported case to show result of arteriosclerosis. Case 2.—Patient with defective vision for three years. Careful examination revealed a lesion in the chorioid, due to arteriosclerosis.

Dr. Wilking reported a case of anuria of sixty hours in a new born babe, with recovery. Discussion by Dr. Hamilton.

Relation of Pelvic Inflammation and Stricture of Rectum was the title of a paper by Dr. B. Van Swer-

ingen. The author gave references in literature on this subject.

Discussion by Drs. Porter and Rothschild. Dr. Rothschild also demonstrated new method of tying off umbilical cord.

Drs. B. Van Sweringen, Porter, Hamilton and Rawles discussed their individual methods of tying off the cord. Closed by Dr. Rothschild.

Auditing committee reported that a careful examination showed the vouchers and books of secretary and treasurer to be correct.

Adjourned. J. C. WALLACE, Secretary.

(Meeting of April 12, 1910.)

Society met in regular session in the assembly room, with eighteen members present.

Dr. Porter reported the following very common condition to emphasize futility of attempting to cure a condition that has already developed pyosalpinx and has gone on to hydrosalpinx. Dr. Porter said he had operated a case in which five years ago he had made a diagnosis of pyosalpinx. Patient had spent considerable money in treatment, but had been an invalid or semi-invalid since. Case operated to-day, and pelvis found full of pus and numerous adhesions. Large abscess in cul-de-sac on right side; short stubby tube on left side, with fimbriated extremity obliterated. Case emphasizes fact that simple puncture in cul-de-sac is only palliative.

Dr. Porter also reported a case of extremely large abdominal tumor in a man, which filled about two-thirds of abdominal cavity on right side. Man worked until two weeks before time he was brought to Dr. Porter. Had no sharp pain, but dull, heavy pain. Gave history of falling from bicycle, but had had trouble with side before. Examination of tumor showed fluctuating mass, and provisional diagnosis of polycystic kidney made. Operation revealed cancer of kidney, which was found to be due to a calculus. Dr. Porter does not think cure will be permanent, though kidney and large portion of ureter were removed. He said this is second case of cancer of kidney he has seen which was due to stone, and is also the second case of polycystic kidney in his experience that has taken on carcinomatous degeneration. Size of stone should decide in favor of nephrectomy.

Discussion by Dr. Rothschild, who reported a case which he saw in Herr Fenwick's clinic in London in March, 1910, in which puncture obtained pus containing tubercle bacilli. No tuberculosis in lungs. X-ray showed stone on right side and nephrectomy was made.

Dr. Bulson reported a case of double glioma. One year ago parents brought baby to him because she could not see. Under anesthesia found double glioma, and enucleation of both eyes was advised, but refused by parents. He understands that the eyes were enucleated a few weeks ago, but that the child died. Dr. Bulson suggested that it would be wise to have consultation in these cases.

Dr. Wheelock reported a case of iritis of syphilitic origin in a young lady who has been married only two months; there were no secondary manifestations. Condition was thought to be rheumatic. On consultation with family physician learned that she had secondary rash. Under antisymphilitic treatment patient went on to recovery. Was about to discharge case when on examination found she had lost about two-thirds vision. Suspected that lymph channels had become congested, and under warm fomentations and rest for a few days the condition cleared up.

Discussion by Dr. Bulson, who said (with reference to Dr. Wheelock's last case) that he thought the condition was a uveitis, with probable involvement of the optic nerve. In specific eye lesions the thing to be done is to crowd specific medication. Mercury is the only thing which will produce results.

The Dangerously Tuberculous Cow was the title of a paper by Dr. A. P. Buchman, who said that he had selected abstracts from a number of sources, including statistics of animal industry in Washington. Experiments have proven that the tuberculin test alone is reliable. Experiments have also shown that tubercle bacilli in milk will also be found in the cream, and that butter from this milk contains tubercle bacilli which remain alive for several months. If the human family is ever to be freed from danger of infection with the tubercle bacillus some way must be arranged of ridding the dairy products of tubercle bacilli.

Discussion opened by Dr. Geo. Gillie, who cited a number of instances observed in testing herds for tuberculosis with the tuberculin test. The paper was also discussed by Dr. Nivens, government expert, and Drs. Bulson, Calvin, Rawles, McOscar, Porter, Morgan, Wheelock, Rhamy, Weaver and Dancer. Closed by Dr. Buchman.

Motion made by Dr. Morgan that the City Board of Health have published the list of dairymen who have had their herds inspected. Carried.

Adjourned. J. C. WALLACE, Secretary.

MADISON COUNTY.

The Madison County Medical Society met in regular session at Elwood on April 26, with thirteen members present.

Dr. C. C. Cotton read a paper on "Remedies Other Than Drugs." Dr. Seth Irwin read a paper on "Typhoid Fever," which was followed by a talk by the councilor, Dr. G. W. H. Kemper, on "The Outlook as it Concerns the Young Physicians."

The scientific session was followed by a banquet to Dr. Kemper and the medical society by the Physicians Club of Elwood.

Adjourned. ETTA CHARLES, Secretary.

MIAMI COUNTY.

The regular meeting of the Miami County Medical Society was held in the Commercial Club room, Peru, April 29, with ten members present. Election of officers resulted as follows: President, O. R. Lynch, Peru; vice-president, C. E. Goodrick, Peru; secretary, P. B. Carter, Macy; treasurer, J. O. Ward, Peru; censor, J. C. Fretz, Deedsville.

J. E. Yarling reported an interesting case of a boy, 10 years old, who complained of a brassy cough, chills and fever, sometimes every second day, and sometimes only every third day. These continued several weeks when patient was seized with a violent attack of coughing, during which he coughed up a shoe eyelet and a large quantity of pus. Patient made prompt recovery following expulsion of eyelet.

Adjourned. P. B. CARTER, Secretary.

MONTGOMERY COUNTY.

The Montgomery County Medical Society met in regular session April 19 at the Court House. Dr. W. F. Batman of Ladoga read a paper on "Lobar Pneumonia," emphasizing the fact that while pneumonitis is

a self-limited disease, its course being modified by judicious treatment used at the proper time, it should be impressed on the laity that there is a good treatment for pneumonia. Discussion.

Adjourned. J. L. BEATTY, Secretary.

NEWTON COUNTY.

(Meeting of Jan. 28, 1910.)

The Newton County Medical Society met in regular session at Brook, Ind. Election of officers resulted as follows: President, J. G. Kinneman, Goodland; vice-president, T. E. Collier, Brook; secretary-treasurer, C. C. Bassett, Goodland; censors, H. F. Leedom, Morocco, W. M. Parkinson, Brook, and G. H. Van Kirk, Kentland. A committee was appointed to draw up a fee bill and submit it to the society at a future meeting.

Adjourned. C. C. BASSETT, Secretary.

(Meeting of Feb. 25, 1910.)

Society met in regular session at Kentland. After a discussion of the fee bill, Dr. J. G. Kinneman read a very interesting paper on "Angio-neurotic Conditions," with report of a case. A general discussion followed.

Adjourned. C. C. BASSETT, Secretary.

(Meeting of March 25, 1910.)

Society met in regular session at Goodland. The paper of the day was read by Dr. Frank Kennedy of Goodland, who discussed the subject, "Some Common Injuries and Their Treatment."

Adjourned. C. C. BASSETT, Secretary.

(Meeting of April 29, 1910.)

The society met in regular session at Brook. Dr. Paul F. Martin of Indianapolis was present and read a paper on "Tubo-ovarian Hematocele Simulating Ectopic Gestation." The paper was very interesting and instructive.

Adjourned. C. C. BASSETT, Secretary.

PORTER COUNTY.

The regular meeting of the Porter County Medical Society was held at Valparaiso February 1, with President Take in the chair. The society passed a vote of thanks to Drs. Pennington and Orndoff of Chicago, for their excellent papers which were presented at the January meeting.

Dr. J. P. Simonds of Indianapolis read a paper on "Diphtheria and the Relation of the State Laboratory to its Diagnosis and Control."

Dr. Carson of Valparaiso read an instructive paper on "Pneumonia." Discussion.

Adjourned. G. R. DOUGLAS, Secretary.

* * *

(Meeting of March 1, 1910.)

Society met in regular session at Valparaiso. Dr. Powell of Valparaiso read a paper on "Appendicitis," which was discussed by all present. Dr. Gowland of Valparaiso read a paper on "Anesthesia."

Adjourned. G. R. DOUGLAS, Secretary.

* * *

(Meeting of April 5, 1910.)

Society met in regular session at Valparaiso. Dr. D. J. Loring of Valparaiso read an interesting paper on "Senility," which was generally discussed. Suggested that it be sent to THE JOURNAL for publication.

Adjourned. G. R. DOUGLAS, Secretary.

BOOK REVIEWS

THOSE NERVES. By George Lincoln Walton, M.D. J. S. Lippincott Company, Philadelphia and London, 1909.

This most readable small volume will furnish an interesting hour to him who is possessed of "Those Nerves." There is no doubt that its forceful and original style will appeal to this class of affected individuals and a lasting and helpful impression will be derived therefrom. This is a sort of literature which after reading and enjoying it himself, the physician will be glad to place in the hands of those seeking his advice.

HAND-BOOK OF THERAPY. Cloth. Price, \$1.50. Pp. 421. American Medical Association, Chicago, 1910.

The Therapeutic Department in *The Journal of the American Medical Association* has been commented on so often and so favorably that the Association decided to reprint, in book form, the articles which seemed to be of most practical value to the general practitioner. Conditions governing therapeutic requirements are stated as clearly and concisely as possible. Special care has been taken to avoid unusual drugs, and with rare exceptions the formulas given are combinations which can be easily compounded by any pharmacist.

Besides the articles on therapy, the book contains a list of the articles accepted by the Council on Pharmacy and Chemistry for inclusion in New and Non-official Remedies, as well as tables and compilations of miscellaneous data.

The book is of convenient size for pocket or satchel.

PARENTHOOD AND RACE CULTURE. An outline of Eugenics. By Caleb Williams Saleeby, M.D., Ch.B., F.Z.R. (Edin.). Moffat, Yard & Co., New York, 1909. Price, \$2.50 net.

We owe to Dr. Saleeby credit for having presented in one volume a more or less complete survey and definition of the subject of Eugenics. Among other things he points out the fact that mind rather than physical strength is the dominant characteristic of the survival value in man and that the physical is of value only as it aids the mental. One point of interest that the author calls attention to and condemns is the recent outcry against race suicide. There are many points of practical importance, as education of children for parenthood, the protection of the unborn child, and the guarding of the mother from racial poisons, as alcohol and syphilis. The book is written in a pleasing style and while it flavors somewhat of the enthusiast, its contents are well worth careful study, particularly as the subject is one with which every physician ought to be versatile.

A TEXT-BOOK OF PHYSIOLOGY. For Medical Students and Physicians. By William H. Howell, Ph.D., M.D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Third edition, thoroughly revised. Octavo of 998 pages, fully illustrated. W. B. Saunders, Philadelphia and London, 1909. Cloth, \$4.00 net; half morocco, \$5.50 net.

Perhaps no other field offers greater opportunity for experimental investigation than that of physiology, whether by chemical, physical, or anatomical methods. Deductions therefrom lead to continued and important advance, making necessary frequent new editions of books on the subject. This third edition of Howell's text-book is conservatively revised, being an excellent exposition of the science of physiology of the present

day. To the presentation of Rubner's contribution on growth and senescence, the author calls especial attention, which contribution indicates the benefit to be expected from the application of physical methods in the study of this most interesting subject.

The book will no doubt exceed its former popularity as a text-book. Such a volume may well find a place in the library of any physician, since an intimate knowledge of the science of physiology is necessary to careful and accurate diagnosis.

HAND-BOOK OF OBSTETRICS. By R. Cadwallader, A.M., M.D., Assistant in Obstetrics, University of California Medical Department, San Francisco, Cal. Pp. 370, with 104 illustrations in the text. Flexible Cloth. F. A. Davis Company, Philadelphia, 1908.

Because of the prolixity of most text-books on obstetrics, the author believes there is a place for a condensed résumé of the essential facts of the subject, which will render the work of more value as an actual working guide to the student. This the editor has accomplished in a way that, for the most part, is highly commendable, although there are some features that are open to criticism. Such a one, for instance, is that pertaining to the choice of the anesthetic in labor, chloroform being selected by the author as the one indicated. Late observations would seem to prove that not only is the effect on the kidneys more marked by this drug than by ether, but the danger of hepatic insufficiency, a syndrome closely simulated by eclampsia, is far greater following chloroform.

A few typographical errors are present and should, of course, be eliminated in future editions.

Altogether, there is here offered a handy little manual that should fill its place admirably.

PRACTICAL HYDROTHERAPY. By Curran Pope, M.D. Published by the Cincinnati Medical Book Co., 1909.

Considering the few volumes on the subject of hydrotherapy, Dr. Pope's new work will be most acceptable to those desiring a treatise of the kind. The whole field of application of hydrotherapeutic methods is demonstrated. The first part of the book is given over to the history of hydrotherapy and a brief résumé of the anatomy and physiology of the skin. A more extensive chapter on the physical action of water and one on its internal uses are followed by a section concerning "Associated Procedures." This latter gives in detail the application of light and heat, procedures not strictly hydrotherapeutic but closely allied.

Much of the text and many illustrations deal with complicated apparatus, such as is not practical outside of extensively equipped sanatoria. Likewise in the sections treating of various diseases most of the treatment advised could be carried out only in institutions.

The book is an accurate guide in the form of treatment of which it is an exposition, being the work of one who has had many years of active experience both in teaching and applying the principles therein described.

MEDICAL GYNECOLOGY. By Samuel W. Bandler, M.D., Fellow of the American Association of Obstetrics and Gynecology; Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital, etc. Second revised edition, with original illustrations. Cloth, pp. 698. Price, \$5.00 net.

The chief changes in the new second edition of this popular work are enlargements to the chapters on electricity and hydrotherapy and an addition of several pages on the diagnostic aid of head zones as elaborated by Elsberg and Neuhof.

Unlike many authors of medical gynecology, Dr. Bandler is not an advocate of relegating operative interference to the background of dernier ressort, but firmly insists on such agents when plainly indicated. This is clearly illustrated in his discussion on uterine myofibroma, in which condition he declares that not only are cardiac and renal complications not a bar to operation but are rather an indication for it, since without such treatment the complications only grow worse, whereas oftentimes they clear up following operation.

On the other hand, the author has bent his efforts toward making us more familiar with the variations from the normal physiologic and psychic states that are directly traceable to pelvic disease in women, and has pointed the way to the great amount that can be done by the medical man toward the alleviation of much suffering that is now endured by our women.

THE PROPAGANDA FOR REFORM IN PROPRIETARY MEDICINES. Sixth edition: Containing the various exposés of nostrums and quackery which have appeared in *The Journal of the American Medical Association*. Price, paper, 10 cents; cloth, 35 cents. Pp. 292. Illustrated.

This book presents in convenient form most of the exposures that have appeared in the *Journal of the American Medical Association* showing fraud either in the composition of various proprietary preparations or in the claims made for such preparations. Not all of the products dealt with, however, are such as are—or have been—used by the medical profession. Many preparations of the "patent medicine" type have been subjected to analysis and the results of such examinations appear in this volume. The book will prove of great value to the physician in two ways: (1) It will enlighten him as to the value, or lack of value, of many of the so-called ethical proprietaries on the market; and (2) it will put him in a position to answer intelligently questions that his patients may ask him regarding the virtues (?) of some of the widely advertised "patent medicines" on the market. After reading the reports published in this book physicians will realize the value and efficiency of simple scientific combinations of U. S. P. and N. F. preparations as compared with many of the ready-made, unstable and inefficient proprietary articles.

THE PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under General Editorial Charge of Gustavus P. Head, Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Vol. I, General Medicine, edited by Frank Billings, M.S., M.D., head of Medical Department and Dean of Faculty of Rush Medical College, Chicago, and J. H. Salisbury, A.M., M.D., Professor of Medicine, Chicago Clinical School. Cloth, pp. 403. Vol. II, General Surgery, edited by John B. Murphy, A.M., M.D., LL.D., Professor of Surgery in Northwestern University, Attending Surgeon and Chief of Staff of Mercy Hospital, Wesley Hospital, etc. Cloth, pp. 617. Series 1909. The Year Book Publishers, 40 Dearborn Street, Chicago. Price, single volume \$1.50, for the series \$10.00.

Almost half of Volume I is consumed by a discussion of diseases of the respiratory organs, the review of the subject of tuberculosis being especially full. After the respiratory system, the circulatory organs, blood vessels and blood are taken up. Following these, the

infectious diseases, diseases of the ductless glands, metabolic diseases, and finally diseases of the kidneys are considered.

Volume II opens with an extensive consideration of the subject of anesthesia and analgesia, followed by discussions on some of the points of radiotherapy, wound-healing, tumors; operative technic, etc. After these, the surgery of the various parts of the body, beginning with the cranium and ending with the extremities, is dealt with. The surgery of the alimentary tract, especially the stomach and intestine, is dwelt on to an extent sufficient to merit especial mention.

NEW AND NONOFFICIAL REMEDIES, 1910. Containing descriptions of articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association, prior to Jan. 1, 1910. Price, paper, 25 cents; cloth, 50 cents. Pp. 256.

This is the 1910 edition of the annual New and Non-official Remedies, issued by the Council on Pharmacy and Chemistry of the American Medical Association, and contains descriptions of all articles approved by the Council, up to Dec. 31, 1909. There are also descriptions of a number of unofficial non-proprietary articles which the Council deemed of value. The action, dosage, uses and tests of identity, purity and strength of all articles are given. As an illustration of the scope of the book, attention is called to the following: The articles on arsanic acid and its derivatives, page 35; on phenolphthalein, page 152, and on epinephrine, page 73, indicate the effort which the Council is making to have new remedies known by their correct names. The description of medicinal foods, page 120, should put physicians on their guard as to the small value of such products. Particular attention is called to the description of serums and vaccines, page 169. Since our knowledge of the therapeutic value of new remedies is still largely in the experimental stage, the statements which appear under each proprietary article are based largely on the claims made by those interested. On the other hand, on page 56, under creosote carbonate, is a note on the claims of non-toxicity often made for certain remedies. A similar caution in reference to the claimed harmlessness of intestinal antiseptics appears on page 41 under beta-naphthol benzoate.

PROGRESSIVE MEDICINE. Vol. xii, No. 1. Whole No. 45. A Quarterly Digest of Medicine and Surgery. Edited by H. A. Hare, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College, assisted by H. R. M. Landis, M.D., Assistant Physician to Out-Patient Medical Department of Jefferson Medical College Hospital. March 1, 1910. Paper, pp. 322. Price, \$6.00 per annum. Lea & Febiger, Philadelphia and New York.

The most extensive section of this number is the first one, that of the surgery of the head, neck and thorax by Frazier.

The discussion on tumors of the hypophysis is both interesting and well written, with excellent illustrations. Von Eiselsberg's five cases operated on by the Schloffer method are briefly detailed. Frazier again deprecates the administration of morphin in brain lesions, particularly when they are subtentorial. The surgery of the thyroid, about which much is now being published, and thoracic surgery are treated in a well-condensed form.

Of particular interest in Ruhrh's contribution on the infections, are his sections on the house-fly as a carrier of infection, malaria, leprosy, anterior poliomyelitis and rabies. Tuberculosis is given the usual prominent place in this department and we are surprised that the editor allows Koch's challenge, so ably answered by Arloing and others, to show a pulmonary case infected with the bovine form, to stand.

Crandall's pediatric section presents some good points on status lymphaticus and on artificial feeding.

The section on nose and throat opens with a very creditable résumé on "taking cold."

Otology consists mostly in this number of a consideration of labyrinthine disorders.

A TEXT-BOOK OF THE PRACTICE OF MEDICINE. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Ninth revised edition. Octavo of 1326 pages, fully illustrated. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$5.50 net; half morocco, \$7.00 net.

Anders, like other notable writers on the Practice of Medicine, considers a frequent revision of his most estimable work necessary in this period of rapid advance in medical science. The various new means of diagnosis, notably by laboratory methods; serum and vaccine therapy; more extensive consideration of tropical diseases; and a thorough revision of the Section on the Diseases of the Nervous System are particularly to be noticed.

The very helpful tabulated differential diagnoses continue as a part of the book.

In the treatment of gonorrheal arthritis no mention is made of antigonococcic serum or vaccine, which thereby promises much in some of these intractable cases. Under the subject of special remedies of tuberculosis, Wright's method of succinimide of mercury injections is given in detail and classed before the more efficient method of establishing immunity by injection of tuberculin.

The author calls attention to the importance of a knowledge of the individual patient, his peculiarities, both mental and physical, in successful treatment of individual cases and the necessity of employing psychotherapeutic measures in selected cases.

As in previous editions the book is well systematized and shows the careful discriminating ability of the author in the selection of the practical advances in medicine and the exclusion of the more or less obsolete and insignificant points.

THE PRINCIPLES OF PATHOLOGY. By J. George Adami, M.A., M.D., LL.D., F.R.S., Professor of Pathology in McGill University, etc., and Albert G. Nicholls, M.A., M.D., D.Sc., F.R.S. (Can.), Assistant Professor of Pathology in McGill University, etc. Volume II. Systemic Pathology. With 310 engravings and 15 plates. (Cloth, pp. 1082. Lea & Febiger, Philadelphia and New York, 1909.

The first volume of this excellent work having treated in detail the causes of disease and the morbid and reactive processes thereto in a general yet complete way, it remained for the author to take up the results of disease upon the different special systems of the body. And while the pathologic anatomy of the diseases of the various organs is treated in a rather condensed way, yet a most valuable adjunct is introduced in the way of so-called "functional pathology" which renders the work at once invaluable as an aid to clinical medicine. It is to be hoped that this innovation in a text-book of pathology will bring to the editors the

gratitude of both teachers and practitioners, for the real student of clinical medicine is just as anxious to be familiar with the alterations of function that are produced in an organ by a given disease as with the histologic changes wrought by the same agent, if not a little more so.

The different systems are taken up in what seems to us the most logical sequence, beginning first with the great cardio-vascular system, including the various changes and diseases of the blood, blood-making and blood-carrying organs. After this comes a discussion of the respiratory and alimentary systems, followed in order by the nervous system, ductless glands, genito-urinary, tegumentary, muscular and osseous systems. Throughout all there is the same general plan of introducing a new subject by a description of the functional alterations, followed by a consideration of the various diseased conditions that may be associated with the particular organs under discussion, thus bringing about a harmonious fusing of the two fundamental branches, physiology and pathology.

As was said in our review of the first volume, the work is truly a masterpiece and deserves to take its place at the head of the list of pathologic texts in the English language. Indeed, we have no hesitancy in predicting that such will be the case.

A TEXT-BOOK UPON THE PATHOGENIC BACTERIA. For Students of Medicine and Physicians. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. Sixth revised edition. Octavo of 709 pages, fully illustrated, a number in colors. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$3.50 net.

This eminently useful book is presented in its sixth edition, having been revised to include some interesting and valuable information concerning pathogenic bacteria. The first part of the book is given over to a clear and concise exposition of the theory of immunity and the various phenomena of the action of cells and cell products; then the various mechanical means of handling bacteriologic specimens are considered, and following this each pathogenic bacterium is treated of separately.

The phenomena of anaphylaxis are given briefly but clearly. The section on syphilis, with its consideration of the treponema pallidum, includes a detailed description of the Wassermann-Bruck reaction with its various modifications.

Particularly valuable are the foot note references which furnish an extensive bibliography of the various subjects considered. The vast amount of literature on the subject of bacteriology demands utmost care and discrimination in the selection of references that are useful and significant.

As formerly, medical students will find the book an accurate guide in their bacteriologic work. The text is so presented that the subject matter will be easily and profitably grasped by those who during their student days had not the advantage of the light that modern science has thrown on the etiology of disease.

THE ROENTGEN RAY IN PEDIATRICS. By Thomas Morgan Rotch, M.D. Published by the J. B. Lippincott Company, 1910.

This recent work of Dr. Rotch covers a field of medical literature that has never before been systematically treated of in a single volume. The book is devoted to the diagnosis of disease in early life, giving a full knowledge of the results to be obtained from the application of the Roentgen method.

The introductory chapter gives briefly an account of the various points to be noted in the interpretation of plates, then follows a division devoted to living normal anatomy, including a short description of some 26 plates.

The second division is highly instructive, being a careful exposition of the great discrepancy between chronologic and anatomic age and setting forth the advisability of future regulation of gymnastics, athletic sports, school life, and child labor by means of anatomic conditions rather than by chronologic periods. The author gives some valuable statistics on the subject and shows the reliability of having skiagraphic plates in this very important age classification.

The next chapter deals with diseases of the new-born, giving a description of the illustrations which follow. These plates, as well as those of the next chapter of diseases of nutrition, are very clear. The importance of early recognition of the latter diseases is evident in order to obviate the later and more serious manifestations.

A short division is given on diseases of the head and spine showing normal and pathologic conditions of the sinuses, anomolous conditions of the teeth and illustrating various affections of the spine. A very full and comprehensive series of plates taken in chest and abdominal diseases gives an idea of what can be seen of tissues other than the evident osseous structure. A brief section on detection of foreign bodies and a full one on the extremities complete the volume.

Inasmuch as time exposure of the plate plays so important a part in the distinctness of outline of a radiograph, it would seem that the student should know the time exposure of each plate he studies. Such information accompanies but a few of the illustrations. The index refers only to the literature. An index of plates which so largely make up this volume, an atlas as it is of radiograms, seems essential to make it complete.

TEXT-BOOK ON THE PRINCIPLES AND PRACTICE OF SURGERY. By George Emerson Brewer, M.D., Professor of Clinical Surgery in the College of Physicians and Surgeons, New York. Octavo, 908 pages, 415 engravings and 14 full-page plates. Cloth, \$5.00 net; leather, \$6.00, net. Lea & Febiger, Philadelphia and New York, 1909.

The advances made in surgery in the rather long interval since the first edition of this work, offer an opportunity for many changes and additions in this new, second edition. While condensation must of necessity obtain to a very great extent in a single volume surgical text-book of to-day, yet the addition of some two hundred pages enables a consideration of the important facts in pathology, diagnosis and treatment, that is in keeping with modern surgical knowledge.

A most admirable feature in the illustration of the work is a number of colored photographs of fresh, gross specimens taken by the Lumiere process. The other illustrations are, however, both profuse and accurate.

The chapter on infections is exceedingly interesting and well written, from a surgical standpoint. Among other important bacteriologic questions mentioned is a commendable conservatism regarding the differentiation of the tubercle bacillus in the urine, the author insisting upon alcoholic decolorization for 8 hours to rule out the smegma bacillus, and even then, he says, one cannot be absolutely certain without resort to animal inoculation.

The editor takes the credit for having reported the first case of so-called "acidosis" following anesthesia, a

condition, whose surgical gravity is now, though but recently, fully realized. From his chapter on anesthesia one would conclude that the author is more favorably disposed toward chloroform than present backing would warrant and the same criticism would hold as to the antiseptic value he seems inclined occasionally to ascribe to hydrogen peroxid.

Most of us would take issue with the statement that, in the treatment of acute, diffuse peritonitis, the consensus of opinion is in favor of flushing the abdomen. More emphasis than presented should be laid on the colonic use of saline solution in this condition, by the method of proctoclysis.

While all subjects are necessarily treated in a rather brief and condensed fashion, yet it must be conceded, as before stated, that for a single volume text on so broad a subject, the author has utilized his space well.

A few typographical errors are to be noted. Otherwise the publishers' work is well done.

SERUM DIAGNOSIS OF SYPHILIS AND THE BUTYRIC ACID TEST FOR SYPHILIS. By Hideyo Noguchi, M.D., M.Sc. Associate Member of the Rockefeller Institute for Medical Research, New York. 14 illustrations. J. B. Lippincott Company, Philadelphia and London. Price, \$2.00.

This monograph is the first fairly complete brief account of the principles of serum hemolysis and of the behavior of combinations of antigens and antibodies towards hemolysis, together with the detailed technic of the Wassermann and Noguchi methods of application of the phenomenon of complement fixation in the diagnosis of syphilis. The theoretical basis on which the reaction is founded is set forth in such a comprehensive yet simple manner that not only the practitioner who has had no experience with the test, but one who has never done any hemolytic work or who is not familiar with the immunity theory, can readily grasp the principles and put them into use without further reference.

The first part of the volume is given over to the discussion of the theory of hemolysis and the various factors participating therein. The author then gives a brief chapter on the various forms of complement fixation tests pointing out wherein they differ one from the other. Then follow several chapters giving specifically the Noguchi test. These are succeeded by the technic of the Wassermann system and finally the volume is completed by a description of the butyric acid test.

One notices throughout the book a pronounced tendency to emphasize the argument in favor of the author's own method. On page 10 is the statement that within certain limits the quantitative relationship existing between absolute amount of complement and amboceptor required to produce complete hemolysis is such that an increase of one factor, say complement, permits the use of a less amount of the other factor, namely, amboceptor. While the author demonstrates by diagrams and text this phenomenon as actually occurring, we find no explanation that will make it coincide with Ehrlich's theory.

In heading the tables given in the text the author might have been more specific. For instance, Tables 4A and 4B are entitled "Blood Serum," when in all probability he meant the percentage of untreated cases of syphilis giving a positive reaction to the various methods enumerated.

With this book as a guide and a little perseverance, the serum test for syphilis is much simplified.

MEMBERS OF THE INDIANA STATE MEDICAL ASSOCIATION FOR 1910.

The following is a list of members of the Indiana State Medical Association for 1910, as furnished by Secretary Heath. It includes all those who have paid dues up to May 1. If there are any mistakes in the initials, spelling of name or the address, we shall be pleased to be notified so that correction may be made on our mailing list.—EDITOR.

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ORIGINAL ARTICLES

SYMPOSIUM ON CARDIOVASCULAR DISEASES.

DEMONSTRATION OF THE ACTION OF THE HEART VALVES.

W. J. MOENKHAUS, Ph.D., BLOOMINGTON.

I have selected the left side of the heart showing the mitral valves and the aorta showing the semilunars. The method is as follows: All the pulmonary veins having been tied off and the coronary arteries plugged up with cotton soaked in paraffin, a small window is tied into the left auricle and another into the aorta. By placing a small incandescent lamp in the interior of the left ventricle the valves may be seen with perfect clearness through the respective windows. The water is supplied to the heart from a pressure bottle through a rubber tube emptying into the auricular window. During the beat the water passes out of the heart by a similar tube leading from the aortic window to a pressure bottle, the height of which is adjusted to the pressure desired in the aorta. The force of the heart beat is supplied by the compression of a large rubber bulb tied into the apex of the left ventricle. During the compression of this bulb the water is forced up against the mitral valves, closing them, and through the semilunars into the aorta. The pressure from the bottle closes the latter when the intraventricular pressure is reduced; and the water which has accumulated in the auricle opens the mitrals at the same time. It might be worth while to call attention to the fact that the places of contact where the valves meet each other in closing are not fine lines, but may present considerable surfaces, so that in the mitral valves, for instance, quite a considerable lesion would have to occur in the periphery of these valves to make them incompetent. The same could be

said, to a lesser degree, of the semilunars. This demonstration is faulty in that we do not have the action of the living papillary and wall muscles of the heart. Forcing the water in by means of the bulb spreads the walls of the heart instead of compressing them as in the natural state.

THE CONDITION OF THE HEART MUSCLE AND VASCULAR SYSTEM IN VARIOUS HEART LESIONS

R. H. RITTER, Ph.D., INDIANAPOLIS.

I want to take up a few minutes discussing the relationship between the heart muscle and the condition of the vascular system, and the relationship which the myocardium bears to the general bodily welfare. It is a trite saying that it is not the lesion of the heart which causes the trouble or which is the thing of the greatest significance; it is the state of the heart muscle. This condition of the heart muscle depends on a number of factors, some of the most important of which are, first, the condition of the blood stream itself, whether or not it is pure or whether it is contaminated with toxins leading to various protoplasmic degenerations; secondly, whether the heart muscle has a sufficient quantity of blood, however good it may be; and, third, the relationship between the condition of the heart muscle and the work which it is called upon to do.

Going from the vascular side towards the heart there are certain conditions which affect the amount of work the heart will do. I will exclude the acute toxemias, such as in diphtheria, which lead to sudden failure of the heart muscle, but will speak of chronic conditions which are far more common. The primary work the heart is called upon to do is to dilate the arteries and just in proportion as these arteries are responsive to the vasodilator and constrictor nerve fibers, in such proportion will the heart action be normal; so that whatever narrows the blood paths

demands from the heart increased activity in order to supply the tissues with a normal quantity of fluid. If the paths are narrowed, the blood must flow under greater pressure. There are two conditions which narrow the paths. The most common condition is that of arteriosclerosis, leading either to a narrowing of the path or, what is almost the same thing, the hardening of the vessel walls, which interferes with their distensibility, again requiring greater activity on the part of the heart muscle. In a condition of chronic toxemia, as occurs in syphilis, for instance, we have changes occurring in the intima leading to fibrous hyperplasia, affecting not, as a rule, the muscularis, but the fibrous connective tissue of the intima. Normally the intima would be confined to a narrow band represented practically by the internal elastic membrane. It may become thickened, the vessel may retain its elasticity and can dilate, but the caliber of the vessel is permanently constricted and the blood must be sent through at a higher pressure. Fortunately, in syphilis this does not involve the whole vascular system to the same degree as in some other conditions. In ordinary arteriosclerosis we have much the same condition, but, in addition to the fibrous hyperplasia, a degeneration of the muscularis. This is said to result in minute breaks in some instances. The intimal hyperplasia is in a sense a conservative process and strengthens the vessel wall, where otherwise it would be weakened. But we have a narrowing of the path, at least in the onset, with a consequent damming back of the blood in the left heart, calling for more work on the part of the left heart to keep the circulation going.

We have here a figure representing ordinary atheroma which is usually nodular or occurring in patches. There is another form of arteriosclerosis closely simulating syphilis as shown. We have some degree of thickening showing a little patchy atheromatous degeneration. That is the condition which obtains in arteriosclerosis or atheroma which is so common in old age, which leads some to say it is on the border between the pathologic and the physiologic.

There is another condition called attention to by Russel. We know the vessels are contracting and dilating to meet the needs of the tissues. We know in some conditions this contraction lasts an unduly long time because of the presence of toxins stimulating the vasoconstrictors. The muscularis is contracted, unnaturally thickened, not because there is increase in the number or size of the fibers, but from the change in form that occurs in the contraction of muscle tissues in general. This leads to a wrinkling of the intima

and a narrowing of the lumen of the vessel. If this continues it becomes pathologic, the blood path is narrowed permanently, the pressure must be increased and the extra work is demanded of the heart muscle. If this persists we will find just as much hypertrophy as in the other forms of muscular narrowing and we will have what is called the idiopathically enlarged heart or simple hypertrophy without valvular lesion. This is what Russell calls hypertonus, an abnormal, persistent increase in the tonus. This figure shows a condition which may be marked in the larger vessels especially, and is a form of arteriosclerosis. The change is not always confined to the larger vessels, however. It is not uncommon to find it in the kidney in certain of the vessels. The result is the lumen of the vessels is diminished more and more by the intimal thickening and mural degeneration, and the small vessels are converted sometimes into hyaline masses and obliterated. This again calls for increased work on the heart.

Now, going to the heart itself, sclerosis is prone to occur in the aorta. The sclerosis may be a compensatory process to strengthen it against the constant increased pressure of an hypertrophied heart, there being little degeneration. However it comes, we know it is prone to occur primarily in the aorta, and one of the favorite seats is about the coronary arteries. These vessels, then, cannot dilate with each dilatation of the first portion of the aorta and a sufficient quantity of blood cannot be sent through the coronaries and, therefore, the heart muscle cannot be properly nourished. Again, the coronary arteries may be the seat of these changes which have been described in other arteries, in the spasmodic form sometimes giving rise to angina pectoris, showing at autopsy no changes except acute anemia of the heart muscle itself. These changes may occur in the coronary until the capacity of the vessel is so diminished that the heart muscle can be no longer nourished.

Still one more factor, and that is the pressure of the blood within the aorta itself. If the coronary artery is narrowed, or if the orifice of the coronary is narrowed, we can see at once that a sufficient quantity of blood cannot be sent to the myocardium for nutrition. But, again, if the myocardium is softened so that the pressure within the aorta is markedly diminished, there may still be a failure of nutrition because there is not sufficient blood pressure to keep up the flow of blood through the coronaries. In either case we have the muscular degeneration. So that, after all, all of these lesions depend for their significance upon the condition of the myocar-

dium itself. As long as the myocardium is well nourished the individual will get along pretty well, excluding acute nephritis, apoplexy or angina pectoris. I have specimens which illustrate the lesions very well and will be glad to demonstrate them to you individually at the proper time.

CLINICAL CASES SHOWING TYPES OF MYOCARDIAL LESIONS.

A. C. KIMBERLIN, M.D., INDIANAPOLIS.

I have here three patients whose symptoms and condition I will attempt to present as pathological and clinical evidence in support, in part, of what has been said by those who have preceded me. The main purpose of this presentation, you will bear in mind, is for the demonstration of the changes which may be present in the arteries and myocardium. Consequently in the discussion, while it may depart from the subject primarily, the object will be to show the influence of disease involving the vascular system, located far away from the heart, yet changes so strongly predisposing to premature myocardial breakdown as to determine with considerable accuracy the longevity of a given case, as well as to give a hint at least as to what hygienic or therapeutic measures are indicated in treatment.

I have here three types of patients. The first, a lady aged 68 years; with a negative family history, a personal history of nothing but chronic constipation. The striking feature in her physical examination is the extremely small size of her radial arteries. You will be impressed further with the difficulty with which you find them. This, you will note, quite harmonizes with the sphygmographic tracing of the radial pulse, shown on chart No. 1. You will notice that the pulse wave is very small and is quite flat on top, showing that the arterial pressure is well sustained, as indicated by the instrumental tracing. This is in striking contrast with the tracing found in the other two cases shown on Charts 2 and 3. In this subject we have a sustained blood pressure, which fact is borne out by the Erlanger blood pressure apparatus which registers a systolic pressure of 210 mm. The diastolic pressure, on account of the small volume of moving blood, is difficult to estimate. Her blood pressure has been repeatedly taken for the last four or five years and is known to be about 200 mm. Not only is the artery itself small, but the pulse wave is also small and the pressure high. As a result of this condition she shows evidence here of a strain on the first part of her arterial system, which acts as a fulcrum between the

heart and the systemic vessels. On auscultation you hear a murmur in the aortic region, systolic in time, and is not transmitted in any direction; it is low pitched and varies in intensity slightly as the heart may be excited. You will observe her chest in shape is quite emphysematous; consequently the outlining of her heart is rather difficult, but you will note that the apex is located (at the blue pencil mark) in the fifth interspace $4\frac{1}{4}$ inches from the middle line, showing she has a hypertrophy confined very largely to the left side. This is the result of the heart's increased effort in forcing the blood through chronically contracted, or vessels at least in a state of chronic hypertension. If we follow this patient's examination and find a systolic, rather low pitched murmur, heard immediately over a small area in the aortic valve region, not transmitted, taken in connection with the great hypertrophy of the left heart, the very high blood pressure and great accentuation, yet clear ringing aortic valve closure—the diagnosis suggested would be that this patient is suffering from an aneurismal dilatation involving the first part of the aorta. Not a true aneurism, but a dilatation, probably made possible by arrhythmic changes in the walls of the aorta at this point. One in which we feel reasonably sure that the dilatation is very close to the aortic valves, stretching the ring more or less which supports them. This with the increased arterial recoil gives them this intense accentuation which is so very conspicuous in this case. The clear ringing quality of the aortic closure bespeaks a healthy condition of the valve leaflets themselves.

Taking Dr. Ritter's explanation of the function of the coronary arteries, you would not infer that these vessels have been much involved, and the degree of left ventricle hypertrophy would suggest that this heart muscle has in the past been quite well nourished, as she shows a hypertrophy of the concentric type, and a heart with no tendency so far to failure. This patient has practically no symptoms or suffers no inconvenience, except a physiological disturbance, which comes from too much association with medical men. A condition, I might add, which can be very easily established and prove very difficult to relieve when once formed in cardiographs, though, as with many of them, their diseased heart should cause them not the least inconvenience.

This second patient, a gentleman aged 45, has the appearance of being well developed and looks well nourished; a man of good family history; good habits, and personal history—until ten years ago, when he suffered a severe attack of typhoid fever and developed as a complication, endocardi-

tis. A glance at this man's throbbing vessels would at once enable you to make a diagnosis of sclerosis of the aortic valves; an examination of his peripheral vessels, which are soft and straight, his age, and history of infection would leave no doubt about his valvular trouble being of endocardial origin and not arterial as in the previous case. Note the location of the apex, in the sixth interspace outside of the nipple line, and the apical impact is sharp and distinct; on auscultation you hear an accentuated and rather prolonged first sound, characterized by Broadbent as of pure muscular quality or intonation. In listening over the aortic area the sound in this case as compared with the aortic closure in the first, you will note a very great difference. You hear no aortic second sound here at all. What should be the aortic valve sound is replaced by a prolonged diastolic murmur, which is heard behind the sternum down to the ensiform cartilage. There is also present a systolic murmur rather high in pitch and differs from that in the first case in that it is transmitted throughout all the large vessels of the root of the neck. You get here a very distinct so-called Corrigan pulse, also the nail symptoms, or capillary pulse.

In studying the positive evidence of the diseased condition of this patient's aortic valves it is interesting to note how well he has been able to maintain his circulatory balance by the degree of hypertrophy which we find here on examination. The compensation up until recently has been so perfect that he has suffered no inconvenience. All the evidence of organic trouble in this case is too classical to be misunderstood. Nor can the final outcome be in doubt. His kidneys, so far, are normal; his blood vessels, too, are soft and elastic. You will observe on the chart No. 2 that the aortic notch is lacking, but instead there is a slight tremor on the descending arm of the tracing; this, of course, means there is no aortic closure. This is borne out by the tracing which you will observe on the same chart made by the Erlanger sphygmomanometer. Three or four weeks ago this patient had a syncopal attack in which he fell and lay unconscious for a few minutes; this was followed by a slight cough and a little vertigo. The pulse has since been comparatively slow, at rest it is 74, after mild exercise it runs up to 84, but with a few minutes' rest drops to 70. Aside from the very recent happenings in this case, the findings on examination which give you strong evidence of the possible approaching failure of the myocardium is the study of the behavior of the blood pressure after exercise. The systolic pressure measures 132 mm., the diastolic 84, an extreme pulse pressure,

I might add, and yet very characteristic of an aortic leak.

An examination of this patient a day or two ago, immediately after active exercise, showed his systolic pressure reached 148 and the diastolic was raised to 110, with seven minutes' rest the systolic fell to 130, which behavior is not in accord with that of a myocardium in a state of perfect health, as the systolic pressure should continue to rise or be sustained during the interval of seven minutes, unless the exercise has been extremely violent.

This so-called functional test of the myocardial strength would make you feel that this heart muscle at the present time is not being well nourished.

Assuming that he has had this valve lesion for the past ten years and has kept up a condition of perfect compensation, the behavior of the blood pressure under exercise at present does not agree nor harmonize with the pulse rate, nor does it subscribe to the time when blood pressure should normally rise after exercise. His slight cough recently, and attack of syncope would make you feel that this man is approaching closely a myocardial break. A normally balanced hypertrophy may for a time be functionally as good as a normal heart muscle, yet it cannot be carried too far without disturbance of the balance, the nutrition fails and the breakdown comes prematurely, a condition frequently found among athletics.

This third case, a gentleman aged 69, with a negative family history; good habits and a personal history of nothing more than a laborer doing moderately heavy work, presents himself with clinical symptoms of primary myocarditis, which we so frequently encounter at the present day.

First you will note the absence of a definite etiological history; next the absence of any symptoms until about a year ago, when he noticed what is very common in these myocardial subjects—a tendency only to tire on slight exertion. Later, when walking home from his work, he found it necessary for him to rest or go more slowly; at night he noticed that it was difficult for him to sleep or to relax thoroughly. Why this was, he did not know; he was not sick, but simply was not himself. Later he found that extreme exertion would cause a slight dyspnea, or more frequently he felt generally distressed and fatigued. The whole onset was quite insidious. There was no edema of his feet, no liver or pulmonary signs. About the first of last July the climax came, rather abruptly. He developed some swelling of the feet; had a cough without expectoration; suffered shortness of breath on the

slightest exertion. All evidencing an acute cardiac dilatation, the result evidently of a previously slowly developing myocarditis. A urinary analysis even at this time was negative. A physical examination of his blood-vessels showed them to be moderately thickened, freely movable and lying loosely among the tissues about them, and, too, there is no evidence of his having had endocarditis, leaving one to recognize this as probably a case of so-called primary or essential myocarditis with dilatation. Note the outline of the cardiac dulness; it is large and globular with an apical impact quite diffused and tremulous, the strongest point (marked with a blue pencil cross) in the fifth interspace. This relative position of the apical impact is diagnostic of a dilated heart, as you will note the impact is quite an inch within the left border of cardiac dulness. This is in striking contrast with the two preceding cases, in which the compensation is good, and in the aortic case the apical impact is directly on the line of the left border of dulness. We know that in men of sedentary habits, especially those of overweight, and men using alcohol or tobacco or having had syphilis, there develops a condition of atheroma affecting the coats of the vessels which may be and frequently is confined to the coronary vessels alone. Such cases do not necessarily have the preceding stage of general hypertension or evidence of involvement of the vascular system at large. In chronic interstitial nephritis we have not only hypertension early, but frequently, as shown in the chart, and pointed out by Dr. Ritter, an obliteration of the lumen of the blood-vessel that can be assigned as the direct cause of the myocardial changes so evident in this patient, but when the history and physical findings are lacking you are forced to some other theory for your primary myocardial changes, if you are to make an intelligent diagnosis or to direct a proper line of treatment. In short, this man represents a type of myocarditis not well worked out. You will note in the tracing on Chart No. 3 that the dicrotic wave is very low as compared to the height of the pulse wave tracing. This might suggest a leak in the valve, but there is no evidence of a valvular insufficiency. He has a slight systolic murmur at the apex which might suggest a relative mitral insufficiency, but this murmur is not transmitted, which would indicate that it is myocardial or possibly pericardial. The absence of renal lesion in this case, and the history as well, rules out pericarditis, so that it is more than likely that this murmur is due to a thinning of the walls of the heart. The tracing made with an Erlanger you will note shows a cup-shaped bottom without any notch on the descending limb

at all. Further on you will see between the regular pulse marks of a faint contraction, evidently an aborted ventricular systole, as it comes at the point where the heart should normally register a pulse wave. Observe that after these missed or aborted beats, the heart expels a larger volume of blood, or at least expels it with greater force, throwing the needle very much higher than the normal. This tracing shows quite conclusively that we are dealing with a myocardial weakness pure and simple. This irregularity is not of sinus or nodal origin, but bespeaks merely a want of strength or tone in the heart muscle itself. His average blood pressure is 120, when this irregular tracing was made, but the tracing shown below, taken after slight exercise, you will note corrects the irregularity shown in the first tracing. It is interesting to note this exercise increased the pulse rate from 70 to 132, and the blood pressure was immediately raised from 120 to 134. The blood pressure was slightly increased, but most remarkable, you note the heart's action, or at least the pulse rate, as shown by the tracing, was very much more uniform and regular. After five minutes' rest in recumbent position, the pulse dropped to 84 and the blood pressure fell to 118. This patient was now rested in a quiet room for forty-five minutes. When the tracing again, with the Erlanger, showed practically the same irregularity as was found in the first tracing (see at the top of chart), taken when this patient was at rest. The fact that his pulse was steadied and regulated by moderate exercise in the face of a functionally weakened myocardium, is certainly suggestive, both as to diagnosis and rational therapy. The only apparent explanation of this is that moderate exercise puts this man's blood into active circulation, and as soon as the intracardiac pressure is raised the heart muscle received a normal stimulus and its rhythm is reestablished. This is quite in keeping with Russell's theory as to rhythmicity being maintained in part at least by a normal intracardiac pressure. In prescribing massage or exercise as we do in some myocardial subjects, it is quite necessary that the regularity and quality of the pulse, as well as the rate, be taken before as well as after the treatment, to see if it is properly suited to the condition. This is quite valuable, and can be accurately demonstrated, especially by instrumental means, and to a degree approximated with fair accuracy by a well-trained finger. You would expect much and lasting good from this kind of treatment if you could place the right environment about this patient.

In the second or aortic case the question might be asked, what will be the result? We of course

know the limit will ultimately be reached, but we also know that even where we have quite a marked failure resulting from aortic valve lesion, without disease of the peripheral vessels, with a clean kidney, and a history of good habits and heredity, etc., that we may hope to carry this class of patient for a long time. In this first case with a marked hypertonus, thickening, and narrowing of the peripheral vessels generally, that still a little might be accomplished in relieving the strain. And in the absence of marked nervous or pulmonary symptoms, it would be possible to continue this patient indefinitely by proper treatment; but how unfortunate that the diagnosis of the conditions producing this hypertension in the vascular system could not have been recognized before a true hyperplasia of the middle coat had developed, and thereby have saved this patient the change now so apparent and advanced, involving the first part of the aorta.

DISCUSSION.

DR. C. S. BOND, Richmond: This is one of the most interesting subjects in medicine. In the last few years more men have given attention to arterial pressure, and the balance which exists between the heart muscle and the blood pressure in the heart, veins and arteries than any other subject. In the last year it has been my good fortune to do considerable work in this line, as Dr. Hirschfelder, of Johns Hopkins Hospital, is issuing a new book on heart lesions. It has been my pleasure to make several illustrations in the way of microphotographs of heart lesions for this book, and I have been interested in the work as it has been going on. There are a great many moot questions brought out at the present time. Dr. Adami is a strenuous advocate of a notion, that varies from that of others who work in this line, in regard to the conditions which underlie blood-vessel lesions, both in the veins and arteries. He claims, and it seems to me a just claim, that the arteries are tortuous for two reasons: not only due to the blood pressure in the arteries themselves, causing proliferation of cells and thickening of walls, but from stress of pressure on the weakened parts of these vessels, causing dilatation at this point, much as the banks of streams are changed by erosion of non-resisting portions. We know a stream washes out the bank by its own power in the different directions. In the arteries we have the natural resistance to overcome in the walls. It may be mild or intense, as in the patient with the blood pressure of 200, or the other with the pressure of 134. If the arterial walls are thin at any point, we have a dilatation of the artery, because it is unable to resist the pressure. If it is pressure which it can resist we will have a thickening which makes an irregularity in the arterial wall. It is plain to be seen in looking over these arteries that are filled up by prolifera-

tions and infiltrations (outside of the syphilitic arteries) that we have almost always an irregular outline. We have most always a proliferation of cells and an atheromatous condition narrowing the artery. The artery is irregular in outline because the pressure at that point thickens it or weakens it. We have accommodation to a great extent, but where the artery is cut off by an atheromatous condition, we will have very little blood passing through such point. We have a dilatation where we have great pressure on the thin point and the artery is tortuous. This makes a great resistance to the heart's action. There are three conditions in this process of resistance. The bending of the arteries from dilatation, the proliferation of cells and obstructive changes in the various organs of the body, as in the lungs, liver, and especially the kidneys. As the heart enlarges in the act of accommodation, we have increased pressure with more tortuous vessels, until a rupture is imminent in the vessels or the heart muscles undergo some of the numerous forms of degeneration. These three patients here are typical cases, and as much to the point as anything that could be shown to this association, and I want to congratulate Dr. Kimberlin on this unique demonstration. If the heart disease begins in typhoid fever, it may be that this toxemia was instrumental in hardening this man's arteries. It very often happens that the continued blood pressure during the time of typhoid will cause these tortuous vessels. If the stream is very much increased in pressure for even a short time the arteries often harden. We have, then, a need for a balance of power, the heart thickens, and a state of compensation develops, and in this way they go on for years enjoying comparative comfort, where they do not overstrain; and this is the case especially in young people. On the other hand, in the case of explosions, which take place in children, as in diphtheria and scarlet fever, we have stresses thrown upon the heart muscle, with destruction of cells, amyloid degeneration, calcareous or fatty degeneration taking place in the heart muscle, destroying it in such a way as to lose the balance between the peripheral and central circulation.

As to treatment, which is the crucial test, there have been some beautiful demonstrations made in regard to heart tonics, and I want to warn the doctors present as to the so-called heart stimulants. We can make a beautiful sphygmographic record by making the patient walk. We can make a horse go faster by whipping, and after a beautiful demonstration the patient or animal may die. It has been demonstrated that digitalis does whip the heart, but when you whip it through the arterial system you make a venous stasis and slow the heart's action, causing more harm than good oftentimes. Heart remedies in such times of stress should be very carefully selected, and when in doubt about the matter, it is better to

give no medicine than to distress a heart already under a great load.

DR. GEORGE F. KEIPER, Lafayette:—I would like to say something on this subject from the standpoint of the ophthalmologist. It is possible for you to see the actual arteries and veins of angiosclerosis or arteriosclerosis. There are some very characteristic eye pictures with reference to conditions of this kind, and anybody can observe them with the ophthalmoscope after a little practice. In the first place, in looking at the retina in a case like this, we see a peculiar condition of the arteries which we call silver-wire arteries. You see the blood-vessels right before you in the actual condition described by Dr. Kimberlin, which you cannot see in the radial or in any other part of the body. There is another characteristic symptom. When one vessel crosses another in the retina, you can see the result of the pressure of the superimposed vessel. Then there is the question of hemorrhages, varying, of course, in their appearance, according to the layer of the retina in which the hemorrhage takes place. Sometimes these patients come to us complaining of diminution of the vision, and the first impulse would be to fit glasses and help the patient. Well, if one is wise, he will examine the eye completely, and if he finds a condition of that kind therein it will not be a question of glasses, but there is a possibility of improving the vision by reducing the blood pressure. Now, I wish to urge upon the doctors here to be a little more universal in the use of what has been called the sphygmomanometer. I take the blood pressure when I see such symptoms in the eye, which is important. Do not buy a cheap instrument like the Riva Rocci. Any instrument ought to have a broad cuff if you expect to make any observations that are accurate. I should like to put an instrument on the old lady and demonstrate it. You will observe this condition in the eye long before the general practitioner is able to detect it either in the heart or the radial pulse or the temporal arteries.

DR. F. B. WYNN, Indianapolis:—It seems to me a study of the myocardium in the various affections is one that we need awakening upon. I want to mention an incident of purely accidental observation this past summer that is of physiological interest and teaches a practical lesson. I have been up in the Adirondacks where John Hayes, the Marathon runner, was training. He made daily runs around the lake, of 16 to 20 miles. I was curious to see the effect of such training upon the heart muscle. He was very kind in allowing me to examine his pulse and heart. His heart is only very slightly hypertrophied. Ten minutes after making one of these long runs he feels perfectly comfortable, pulse normal and has a sense of well-being. The practical lesson of John Hayes comes from his narration to me about himself, that he has worked up to such power of endurance gradually. He says:

"I have not been a foolish athlete. I have developed myself by degrees over years and years of practice. I never push myself to the limit. I stop short of breaking the bow. I never go until I collapse; by doing that I have kept my heart all right." And applying his practice as an athlete in our cases of chronic myocarditis, we need to be careful and watch them closely. There should be graduated exercise, and the pulse and blood pressure must be watched.

DR. A. C. KIMBERLIN, Indianapolis (closing):—We do not have tortuosity of the blood-vessels unless there is or has previously been a condition of peripheral resistance, combined at one time with elasticity of the walls of the arteries, together with an increased force of the heart's action. This is illustrated by your hose lying on the lawn with the nozzle partially closed; if increased pressure comes on, as in case of fire, you will observe the hose begins to worm and twist about until it gets in a position to stand the greatest strain. The same is true of the blood-vessels; as you increase the peripheral resistance, they have a natural tendency to become more or less crooked. But in the early stages of hypertension, if you can remove the cause of the peripheral contraction, the same thing happens as after you open or remove the nozzle from the hose; there is no tendency for the vessels to become tortuous.

The lesions Dr. Bond speaks of are associated more often with atheroma of the larger arteries rather than sclerosis of the capillaries or the smaller arteries. The eye symptoms spoken of by Dr. Keiper are generally characteristic of a renal sclerosis or a renal complication in a general sclerosis, it is rarely found in primary atheroma. And while the circulatory balance may be disturbed, as shown in venous stasis and edema, it is quite the exception in myocardial failure of the sclerotic variety.

The question is asked by Dr. Hall as to the influence of toxins in producing vascular-hypertension and consequent sclerosis or atheroma. This is the live and vital question, and the one thing which we must determine in these cases early if we are to be of much service to our patients. How frequently young men come to you with nerve symptoms chiefly, and on examination you find their arteries feel rather full, smooth and firm; you estimate the blood pressure, and find it is not far from normal. You begin to hunt for the cause, which may be from overwork, intestinal indigestion, or the excessive use of tobacco or alcohol, keeping constantly in mind the susceptibility of each individual to the evil effects of slight excesses, when heredity and temperament strongly predispose one to early degeneracy of the cardiovascular system. In studying the primary and active factor in causing these vascular changes, we should never overlook the influence of toxic elements of whatever

origin or character, and which alone may be tolerated indefinitely, but when combined with hard work or mental worry may early bring about disastrous results.

Cushing has demonstrated that toxins, whether chemical or bacteriological, when chronically present in the circulating blood, result in hypertension first, then hypertrophy of the middle coat, making a structural change which has passed beyond the curative stage.

These toxins may and do frequently have their origin from the intestines, or are the result of imperfect tissue metabolism and are chemical in nature. It is a question if great and prolonged nerve tension alone will not in time produce organic changes in the walls of blood-vessels and finally result in myocardial breakdown.

When we get these cases of cardiovascular disturbances early, especially the vascular changes, it is very necessary that we begin at once and remove the cause, if it is an intestinal or stomach disturbance or faulty elimination on the part of the skin or kidneys, or the want of better hygiene as to diet and exercise, we must immediately introduce measures to lessen the formation of the toxic products as well as eliminate those present, before organic changes, which usually appear first in the smaller blood vessels, occurred, if we are to safeguard the heart muscle against a premature breakdown.

A NEW METHOD OF TYING OFF THE UMBILICAL CORD.

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After having seen various methods used to tie off the umbilical cord, it was desired to find a simple, sure, and inexpensive method. Some sort of crushing instrument with clamp was thought of at first. While trying to construct a satisfactory model, I learned that the veterinary surgeons of Austria use a "rubber ligature" to do a subcutaneous castration. The idea impressed me and I thought why not modify and simplify the method, and try it for the umbilical cord.

A strip of pure para rubber 7 cm. long, 3 by 3 mm. in cross section, is drawn through a small aluminium ring 7 mm. in diameter, the opening of which is 3 mm. in diameter, so that a loop 2 cm. long with two free ends is obtained. The one end "a" has a knot fast against the ring and is 7 mm. long, the other end "b" is about 2 cm. long. This constitutes the entire apparatus.

In testing it, after boiling 5 minutes, it was impossible to tear or break the rubber by stretching. We took various-sized and shaped umbilical cords, slipped the ligature over, held the ring be-

tween the thumb and index finger of the left hand, and pulled on the end "b" until the rubber was tightly stretched and the loop had grasped firmly and deeply about the cord—then the end "b" was released and allowed to fly back. As end "a" has a knot, it cannot slip through the ring. The loop, by stretching, is taken up in the end "b." As the rubber is square in cross section and the diameter of the ring smaller than "a" and "b" together, the part "b" (distal to the ring) cannot slip back through the ring. In our tests we placed the tip of a 300 c.c. Pravaz syringe filled with an aqueous solution of methylene blue in one after the other of the vessels of the cord; the syringe was placed against the chest of a very strong man and all his strength exerted, with the result that the vessels, one after the other, were ruptured, but not one drop of the solution came through distal to the ligature. We tried similar experiments with rubber tubing with rupture of the tube, but nothing came through distal to the ligature.

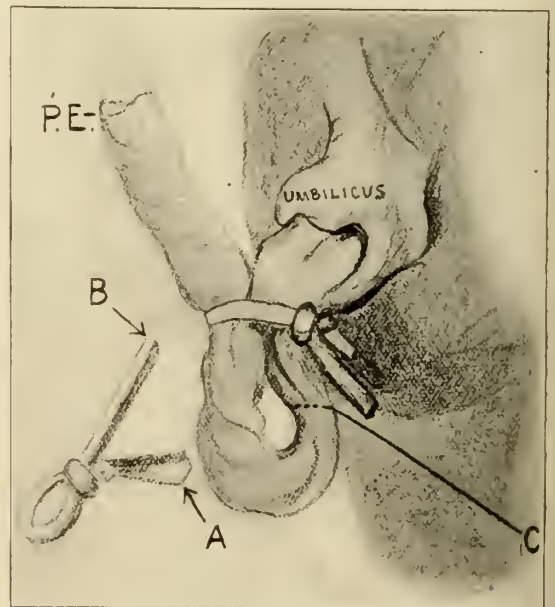


Fig. 1.—P. E., placental end of cord; C, where to cut through.

In trying it out on the living we at first cut between two ordinary twine ligatures and then slipped the rubber ligature over the stump of the cord. On suggestion of Hofrat Professor Schauta, to whom I am very grateful for the use of his material, we now take a loop of cord about 5 cm. distal to the umbilicus, place the rubber ligature over it, draw slightly on the end "b," cut through the loop, draw the placental end of the cord out, and tie it off as usual. The umbilical end of the

cord then has the ligature over it. The ligature is adjusted, so that 1½ cm. is on either side of it, then it is drawn tight and remains until the cord "drops off."

We tried it on about 100 cases and were satisfied with the results. We had no after-bleeding and the cord dropped off normally. It is easy of application, the force exerted is continuous, bleeding cannot take place (it is especially valuable in hemophilia), and costs only a few cents.

The ligature may be obtained from Erhard, Instrument Maker, Lazarettgasse 13, Vienna IX, Austria.

Very shortly Truax, Greene & Co., Chicago, Ills., will furnish the ligature.

INFLAMMATION OF THE SEMINAL VESICLES.*

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EVANSVILLE, IND.

The seminal vesicles, two in number, are situated between the base of the bladder and the rectum. They are about two and one-half inches long, but, when uncoiled, are about five to six inches in length. The upper or back portion of each vesicle is formed of a blind pouch or cul-de-sac and is placed about the termination of the ureters into the bladder.

The anterior extremities are pointed and converge toward the base of the prostate gland and, joining with the vas deferens of either side, form the ejaculatory ducts, one on either side, and which are about three-quarters of an inch in length, and open into the under surface of the prostatic portion of the urethra.

The seminal vesicles are largest in the posterior part and gradually converge to the ejaculatory duct rather in appearance like the "big stick" we have seen pictured in the newspapers for the last few years, and are like it in more ways than shape, for within the confines of this little space originate more joy and sorrow, more bliss and cussedness, more happiness and sin, than in all the rest of the entire male anatomy.

Women are not troubled in the possession of seminal vesicles or a prostate gland.

The seminal vesicles vary in size in different individuals and are capable of holding from one-half to three or four drams of fluid. The seminal fluid is, at least, partially secreted within these bodies and retained there until expelled by the spasmodic action of ejaculation. The seminal fluid is distinctly alkaline, for the purpose of

preserving for the longest period the spermatozoa, furnished through the vas deferens, which joins with each vesicle to form the ejaculatory duct. When the time for ejaculation arrives the spasmodic contraction of the vesicles closes the opening into the vas deferens much in the same manner as the valves between the auricle and ventricle in the heart, and thus forces the seminal fluid out into the urethra, instead of allowing part of it to be forced into the vas deferens.

In making an examination of the seminal vesicles, it is almost absolutely necessary to have a distended bladder, for, without this, it is impossible for the finger of the examiner to reach the vesicles, and only practice can do so then; but my experience has been that if the patient is in proper position, the bladder distended and the examiner having a proper conception of the feel of the vesicles, they can almost always be brought within the reach of the finger, but it takes practice of long standing to intelligently diagnose their feel in health and disease, and to properly treat them in this way when chronically inflamed, just as the trained finger of the gynecologist or ear of the auscultator, is most essential.

Inflammation of the seminal vesicles was first described, I believe, by Lloyd about 1889, and since then this disease has been very accurately studied by Fuller of New York and many obscure pathologic conditions of the male generative organs have been thereby cleared up.

The cause of seminal vesiculitis is almost always, though not entirely, due to gonorrhea extending into the deep or prostatic urethra and thence down the ejaculatory ducts into the seminal vesicles. Rough use or the use of unsterilized instruments can set up inflammation in these organs. Excessive masturbation, coitus interruptus or prolonged ungratified sexual desire may produce a chronic congestion of the organs and thereby favor bacterial invasion and thus, in an indirect way, favor inflammation.

Tubercular disease sometimes affects these parts and sets up a chronic inflammation, the same as in other parts of the body, affected with tubercular trouble.

Vesiculitis may be either acute or chronic. In the acute variety we have very much the same symptoms as those of acute posterior or prostatic urethritis. Urination is painful, as is also defecation, and there is throbbing pain in the perineal region. Sometimes we have retention of urine. To make a positive diagnosis we have to introduce the finger into the rectum, when we may feel the hot and swollen vesicle, but this is so painful that it is very seldom satisfactory,

* Read before the Ohio Valley Medical Association, at Evansville, Nov. 10, 1909.

and I have never been able to get a patient to consent for a second examination. The patient has fever and all the symptoms of an acute inflammation in other parts. An abscess may form and most often ruptures into the urethra, unless it finds its way to the urethra through the ejaculatory ducts, though it may burrow its way through the perineum and rupture externally as an ordinary rectal abscess.

The prognosis of acute vesiculitis is good except when it results in the chronic form of the disease which often lingers indefinitely.

In the treatment of this disease we can do no better than to follow the advice of Hilton in his excellent work, "Rest and Pain." The patient should be put to bed and absolute quiet enjoined. The bowels should be kept in a soft condition, but not too active for fear of intensifying the inflammation. The urine should be kept alkaline and hot fomentations applied over the perineum. Light diet should be given. In fact, the same treatment as in other parts inflamed. The testicles should be supported so as to remove any pressure by their weight. Hot saline rectal injections are often very good. Opium suppositories and the internal administration of opiates to the point of relieving the intense pain should be prescribed. The introduction of any kind of instruments into the urethra during the inflammation is absolutely forbidden, unless we have retention and are forced to use a soft catheter in bladder.

The patient should be kept in bed and an antiphlogistic treatment kept up until recovery is complete, which is usually about a month; this last to guard against the disease assuming the chronic form.

In the chronic form we usually have most of the symptoms of the acute disease, but in a very much reduced degree. In fact, the associated painful sensations are sometimes so mild as to be scarcely noticeable. Sometimes the painful sensations are felt in one or both testicles, the scrotum, bladder and in the end of the penis even more so than in the vesicles, and in this way may lead the physician to mistake other parts to be the seat of the disease. Sexual excitement always increases the painful sensations, and generally some pus and often blood are mixed in the urine. If we have had a case of gonorrhea at any previous time which has infected the deep urethra and have pus in the urine and also blood with pain in the prostatic region and rectum, and especially so after sexual excitement, we should suspect chronic inflammation of the prostate or seminal vesicles or both, and if we make a rectal examination in the proper manner we can verify

our diagnosis by the tenderness the pressure of the finger produces upon these parts, and right here is where the important part of our examination and treatment is to come to the front; for, if this part of the examination and treatment is not done just right, it were best not done at all.

The patient should stand with the legs straight and the body doubled over in almost precisely the position of school boys playing leap frog.

Ballinger, in his work on "Genito-urinary Diseases," recommends the patient be on his back and the thighs flexed up toward the abdomen. I have tried this in several instances and have never been able to reach the vesicles in this position, but if we have the patient in the leap-frog position and a full bladder to press the vesicles down as far as possible, with the left hand pressing over the patient's lower abdomen and with a chair or stool upon which to place our right foot, thereby bringing our knee on a level with the patient's anus so we may have a brace for our elbow, and with the index finger of our right hand well lubricated with vaselin, we can generally reach the vesicles by the combined pressure of the hand upon the patient's perineum aided by the support of our elbow against the knee. By slow pressure overcoming the resistance of the perineal muscles one is able to strip most, if not all, of the contents of the vesicles. This can only be properly done by repeated practice, and, if not properly done, had best not be done at all, for, if the pressure of the end of the finger is too lightly applied, it does no good; and, if too much pressure is brought to bear upon the chronically inflamed vesicles, the disease is aggravated. It is generally best to begin the treatment by using very light pressure of the finger tip until our patient has become accustomed to the treatment, and, also, the inflamed vesicle has become used to the massage; then gradually bring more pressure upon the parts with each treatment until the proper degree of pressure has been reached. This milking or massage should be repeated at least once a week at the beginning and continued until the inflammation and tenderness have ceased to exist; and, as the disease begins to yield to the treatment, the intervals from one stripping to the next should be increased.

At each treatment the vesicles should be stripped from five to ten times slowly and firmly and the treatment kept up until no secretion appears at the meatus after the stripping and until the soreness from the pressure of the finger has ceased.

During the treatment the general health should be kept in the best possible condition and

any other trouble should be met by the appropriate treatment for its special cause. It is like an army capturing a fortified post—the stripping process is the siege gun planting shot in the main fort, but our skirmish line must be looked after at all points by attending to any general derangements that may arise.

Horseback and bicycle riding should be prohibited, and during the active treatment coitus and sexual excitement should be kept in abeyance.

Tubercular vesiculitis, when correctly diagnosed, should receive the same general treatment as tubercle infection in other parts. As a rule, local interference in the tubercular form of the disease is to be prohibited.

SOME POINTS WITH REFERENCE TO THE VALUE OF THE LEUCOCYTE COUNT, AS SHOWN BY THE ANALYSIS OF THREE HUN- DRED MISCELLANEOUS COUNTS.*

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The purpose of this paper is to give a practical demonstration of the pathological fluctuations of the leucocyte count, and some of the points of diagnostic value. To this end the writer has tabulated a number of representative blood counts showing the various fluctuations, both relative and absolute, as they have come under his observation. These counts are grouped, each group representing a type of fluctuation, and each count accompanied by the clinical diagnosis. Only by such comparison with the clinical diagnosis can an analysis be made, for the reason that except in certain well-recognized conditions, like finding tubercle bacilli in the sputum, laboratory findings should not be taken alone, but should be used as important evidence when reviewing the clinical data.

Ehrlich's classification of cells is used as being the most practical for clinical purposes. The large lymphocyte includes the large mononuclear cells of Ehrlich and all lymphocytes larger than a polynuclear cell, while the transitional cells include all mononuclear cells with indented and irregular nuclei. The normal percentage variations of the different types of cells, as given by the different authors on blood work, vary to some extent. The figures herein used are those of Cabot and Boston, and represent the writer's own

experience in blood counting. These figures are: Total count, 6,000 to 10,000; polynuclear neutrophils, 60 to 70 per cent.; large lymphocytes, 4 to 8 per cent.; small lymphocytes, 20 to 30 per cent.; transitional cells, 1 to 4 per cent.; eosinophiles, 0.5 to 4 per cent.; mast cells, 1/20 to 0.5 per cent.

NORMAL DIFFERENTIAL COUNTS.

In Chart 1 is shown a short series of normal total and differential counts. The total counts vary from 4,640 to 9,000, and give an average of 7,358. The polynuclear cells vary from 58 to 69 per cent., and give an average of 63 per cent. The large lymphocytes vary from 4 to 10 per cent., with an average of 7 per cent.

This average is somewhat high, and is accounted for by the fact that these counts were in pathological conditions. The small lymphocytes vary from 19 to 32 per cent., with an average of 25 per cent. The transitionals vary from 1 to 8 per cent., and average 3 per cent. The eosinophiles vary from .25 to 5 per cent., and the mast cells from .2 to 2 per cent. There are two mast cell counts of 1 per cent. and 2 per cent., which are undoubtedly pathological, but the significance cannot be given.

The majority of the counts in this chart are in cases of simple toxemias and slight local inflammations. The exceptions to this are a case of mastoid suppuration and one of frontal sinus abscess. These two counts are typical examples of the low counts of extremely low resistance, both cases having ended fatally. This chart also shows that although the local inflammations have a normal differential count, they have as a rule a high total count, ranging as high as 22,000, with an average of 15,500. This picture, which is usual in minor local inflammations, is explained by the following law, as stated by Sondern: "A total increase of leucocytes means a high resistance, while an increase or decrease of neutrophils is an index of the amount of toxic absorption."

INFLAMMATORY LEUCOCYTOSIS.

Chart 2 represents a group usually designated when the word leucocytosis is used. This is the inflammatory leucocytosis, and is characterized by an absolute increase of the polynuclear cells. In this chart is found a minimum count of 10,500 and a maximum of 52,000, the average being 23,240. The polynuclear cells range from 70 to 90 per cent., with an average of 77 per cent. There are two anomalous counts: one giving polynuclear counts of 27 and 69 per cent., the other a count of 60 per cent. Some observers

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record higher polynuclear counts, going as high as 95.5, and it may be well to state that this difference is due to slight differences in counting, i. e., they include the transitional cells with the polynuclear cells.

If this were done in this chart, the polynuclear average would be over 80 per cent. However, although it may be well to associate them with the polynuclears in summing up results, if we are to accept the double origin theory of leucocytes, this would not be proper; and if we want the true complete blood picture, which will enable the scientific observer to make the most accurate prognostication, we must keep them separate.

A further subdivision of this chart shows a group having total counts varying from 11,000 to 20,000, and polynuclear counts from 70 to 75 per cent., and made up principally of localized inflammatory processes or acute toxemias. The counts from 75 to 90 per cent., with total counts from 10,000 to 50,000, include suppurative processes, severe systemic infections, severe local infections and gangrenous processes.

As special points of interest, this chart includes two malignant tumors of the abdominal cavity; one, an angioendothelioma, gave a total count of 18,650, and a polynuclear count of 74 per cent.; the other, a carcinoma, gave a total count of 21,840, and a polynuclear count of 84 per cent. A case of tubercular peritonitis gave a total count of 23,520, and a polynuclear of 76.8 per cent. Now a tubercular peritonitis ordinarily does not produce a leucocytosis, and in this case it was due to an accompanying appendicitis. In a case of typhoid perforation the leucocytosis of 17,000, with 86 per cent. neutrophiles before operation, dropping to 14,080, and 74 per cent. neutrophiles two weeks after operation, although the fever continued high, is an excellent illustration of the inflammatory leucocytosis as a danger signal in typhoid.

As stated before, a neutrophile leucocytosis is usually due to toxic absorption from infectious processes. It can also be produced by ptomain absorption. This is illustrated by two cases in Chart 2: one a necrotic fibroid, gave a total count of 24,500, and a polynuclear count of 71 per cent.; the other, a large ovarian cyst with a twisted pedicle, undoubtedly necrotic, gave a total count of 52,000 and a polynuclear count of 79 per cent.

The purely suppurative cases in this chart show an average polynuclear count of 79 per cent., while the total count varies from 10,500 to 48,600, the average being about 27,000. The average count in the cases of appendicitis is 27,800, with polynuclears 77 per cent. Thus far

it has been shown that the more extensive or severe the infection the higher the total and relative counts, providing the body resistance is good. If the resistance be low the counts, one or both, will be low. Two cases in Chart 2 illustrate this point: One, a fatal case of mastoid and lateral sinus infection ending in meningitis, first gave a total count of 10,500, with polynuclears only 27 per cent., although the infection was virulent. Later the count rose to 35,500, polynuclears 60 per cent. The lack of polynuclears was replaced by an excess of transitionals, which were 26 per cent., an evidence of rapid waste of polynuclears, and the appearance of immature cells. A similar case was one of frontal sinus infection extending to brain abscess, which gave a total count of 17,900, polynuclears 69 per cent.

A point to be considered in studying the polynuclear count in suppuration is whether the toxins are prevented from escaping into the blood stream. One case of large walled-off abdominal abscess illustrates this point by giving a total count of 27,000, with polynuclears only 60 per cent. It can be seen, therefore, from these cases that the leucocyte counts must be used in connection with the clinical knowledge in order to interpret them correctly.

LARGE LYMPHOCYTES.

Chart 3 gives a series showing a relative increase of large lymphocytes. A true leucocytosis is an absolute increase of the cells, but there may be a relative increase and not a total increase, so that it is necessary to compare the total count to the differential count to reveal the true blood picture.

In estimating a lymphocytosis, both forms of lymphocytes should be considered as a whole, since the division of lymphocytes into large and small, is arbitrary and depends entirely on the size of the individual. Any disease which, directly or indirectly, involves the lymphatic system, may produce a lymphocytosis. Typhoid fever, syphilis, tuberculosis, malaria and pertussis are some of the principal diseases in which a lymphocytosis may be found. This applies particularly to adults, since the leucocytosis of childhood, from any cause, is usually a lymphocytosis on physiological grounds.

Chart 3 gives one total count as low as 1,840, and the highest 47,000, with an average of 18,000. The minimum large lymphocyte count is 8 per cent., the maximum 40 per cent., and the average 16 per cent. The average count in the specific cases is about 14 per cent. This lymphocytosis in syphilis is usually accompanied by an eosinophilia, of slight degree, although the cases here recorded do not average more than 2 per cent. of

eosinophiles. One case of malaria had a total count of 10,320, with large lymphocytes 26 per cent., sometimes a valuable diagnostic point in differentiation of malaria. The typhoid counts give an average of 15 per cent. large lymphocytes.

Chart 4 shows some interesting variations of the count in typhoid. The total counts range from 3,000 to 42,700, or an average of 12,000. The polynuclear cells are low, the average being 59 per cent. The large lymphocytes range from 3 to 30 per cent., or an average of 11 per cent. The small lymphocytes average 19 per cent. The transitional cells go as high as 29 per cent., with an average of 7 per cent. The eosinophiles show low counts, the average being .5 per cent. The eosinophiles are, as a rule, either absent or diminished until convalescence begins, when there is a sudden marked rise occurring some hours before the improvement is manifest. One case in which 12 blood counts were made has some very interesting features. In the second week the total count was 5,400, the polynuclears 65 per cent. Moving the patient to the hospital caused a rise to 16,000, polynuclears 72 per cent., an inflammatory reaction. After a day's rest the neutrophils dropped back, but the total count remained up. Six days later the total count suddenly jumped to 40,000, without any change in the differential count. This high count remained until convalescence, when it gradually subsided. No symptom or incident could be found to account for this rise and no complications developed. This made an extreme large lymphocytosis, their average being about 15 per cent., or a total of 6,000 per c.m. Involvement of abdominal lymph glands might have produced this effect. Some days later there were a couple of hemorrhages, but they did not produce any change in the blood picture except some anemia. In this connection Emerson, in the *Johns Hopkins Hospital Bulletin*, October, 1907, reports two cases of leucocytic crises in typhoid. His cases had a sharp rise of leucocytes following a series of small hemorrhages, until the count in one case reached 28,000, in the other 85,000. In both cases there was a marked anemia. In the case here recorded the blood was concentrated, as shown by a hemoglobin estimation of 105 per cent. at the first examination, and of 100 per cent. three days after the rise in leucocytes. The red cells at this time were 6,480,000. Emerson regarded the crises as manifestations of the struggle between the bone marrow and the anemia-producing infection, and suggests the theory "that in these cases the typhoid infection was especially located in the marrow, where it caused widespread tissue destruction, resulting in progressive anemia."

It is quite possible that the bone marrow was similarly infected in the case to which I have referred, and had to do with the crisis. It was eight days after the blood crisis, however, before the hemorrhage appeared, and only then did the hemoglobin drop, falling to 65 per cent. The day following the crisis the eosinophiles made a sharp rise from .5 to 3.6 per cent. This was a demonstration of the rise in eosinophiles before convalescence begins, for in about two days from this time gradual improvement began and continued, the convalescence being marred only by the two small hemorrhages above mentioned.

SMALL LYMPHOCYTES.

Chart 5 shows a few counts with an excess of small lymphocytes, the highest count being 61 per cent., and the average 38 per cent. These counts represent about the same class of cases as Chart 3. One case of interest gave the following history: There was first a general lymphangitis, which gradually subsided. This was accompanied by a rapid loss in weight, 30 pounds in about ten weeks, with dizziness, nervousness and rapid pulse (90 to 100). A blood examination at this time showed 9,900 leucocytes, with small lymphocytes 36 per cent. Under potassium iodid he gained 20 pounds in about twenty days.

One week after the first blood examination the small lymphocytes were 61 per cent. At the end of the period in which he had gained 20 pounds, they were 46 per cent. He then began to lose and lost 23 pounds in about two months. During these two months the count gradually returned to normal. The dissimilarity between the weight fluctuation and the lymphocyte fluctuation would seem to prove that the count was not due to debility. An enlargement of the thyroid now made its appearance, and at the last blood examination he showed a typical Graves' disease. The small lymphocytosis, then, was probably a part of the primary changes in the Graves' disease.

TRANSITIONAL CELL INCREASE.

Chart 6 shows a few counts wherein the transitional cells are increased, the lowest count being 5 per cent. and the highest 26 per cent., an average of 11 per cent. The majority of the counts were in typhoid, but the two most interesting were in cases of suppuration. One, a case of fatal mastoid and brain abscess, gave a total count of only 10,500, with a neutrophile count of 27 per cent., this deficiency being made up by an increase of the transitionals to 26 per cent. The other case was one of large abdominal abscess, in which the total count was 27,000, the neutrophiles 60 per cent., and the transitionals 8 per cent. Ac-

cording to the commonly accepted theory as to the origin of leucocytes, the neutrophiles, eosinophiles, large mononuclears of Ehrlich and the mast cells come from the bone marrow, while the lymphocytes, including the transitionals, have their origin in the lymph structure.

Now these excessive counts of transitionals are in cases of low resistance, with rapid destruction of the neutrophiles and paralysis of the blood-making tissues by an overwhelming infection. The natural result of this would be the appearance in the blood stream of immature cells, just as occurs in anemia and leukemia. In typhoid we have the disappearance of neutrophiles and eosinophiles and the increase of transitionals. These cases would explain why some observers include the transitionals with the neutrophiles. In typhoid, however, we have also an increase of the large lymphocytes, and some observers consider these cells as senile lymphocytes, so that in the writer's mind there is some question as to whether these transitional cells may not be an antecedent to all types of cells. If this were true, then, the large mononuclear cell ancestry of all leucocytes would have to be accepted.

EOSINOPHILIA.

Eosinophilia is found in disease of the bone marrow, true bronchial asthma, skin diseases, parasitic infections, and as a post-febrile phenomenon. They diminish in acute febrile conditions, and the extent of disappearance is said to be an index of the severity of the infection. One case of eosinophilia under observation, by courtesy of Dr. Hamilton, was an acute intestinal disturbance which promptly cleared up under treatment. The blood showed an eosinophilia of 18 per cent. After treatment they dropped to 4 per cent. Careful examination failed to show any evidence of parasitic infection or skin disease. Neubauer, Staubli and Fricher have recently reported 8 cases of catarrhal colitis in neurotic subjects, showing eosinophilia. In these cases Charcot-Leydon crystals were found in the feces, suggesting some analogy to asthma.

The writer has lately observed several cases of simple intestinal irritation, accompanied by eosinophilia, one case showing 14 per cent., but no Charcot-Leydon crystals could be found in the feces. The eosinophilia of true bronchial asthma, ranging from 10 to 25 per cent., makes a very distinctive test of differentiation between it and renal or cardiac asthma, in which eosinophilia does not appear.

CONCLUSIONS.

A differential count is of much more value than a total count.

The differential and total count taken together may and most often do give much valuable diagnostic and prognostic aid.

The differential count gives an index of the amount of toxic absorption.

A high neutrophile count, with a high total count, indicates either an acute systemic infection, a gangrenous process or suppuration.

A neutrophile count above 80 per cent. usually means suppuration.

A low polynuclear or total count, in the presence of a severe process, denotes low resistance, proportionate to the decrease.

An increase of large lymphocytes, accompanied by an eosinophilia, is presumptive evidence of syphilis in a suspected case.

An increase of large lymphocytes and transitional cells, with a diminution of neutrophiles, small lymphocytes and eosinophiles, in the presence of a continued fever, is strong evidence in favor of typhoid.

Leucocytic crises may occur in typhoid.

Typhoid usually has a leucopenia during the first week; after the first week leucocytosis is common.

A small lymphocytosis may be part of the early pathological changes in Graves' disease.

The rôle of the transitional cells seems to favor the theory that the large mononuclear cell is the common origin of all forms of leucocytes.

CHART 1.—NORMAL DIFFERENTIAL COUNTS, WITH NORMAL LEUCOCYTE COUNT (6-10000), AND WITH LEUCOCYTOSIS (10000 AND UPWARDS)

White Cells.	Polynuclears.	—Lymphocytes—		Transitional.	Eosinophils.	Mast Cells.	Diagnosis.
		Large.	Small.				
4640	66.3	8.7	23.4	1.6	...	...	Diabetes.
5450	60.0	9.7	22.4	2.3	5.3	0.3	Simple anemia.
7614	60.0	8.0	28.0	2.5	1.5	...	Acid toxemia.
8000	60.0	6.0	28.0	4.0	1.5	0.5	Toxemia.
8000	60.5	4.5	28.0	5.3	1.2	0.5	Typhoid.
8800	60.0	8.0	28.0	2.0	1.5	0.5	Chronic gastroenteritis.
9000	65.6	7.5	25.0	...	1.9	...	Simple anemia.
10600	58.0	6.0	32.0	1.0	3.0	...	Morphea.
11360	67.0	7.0	22.5	2.0	1.5	...	Toxemia.
12300	63.0	8.5	25.0	2.0	1.0	0.5	Obesity.
12400	63.0	6.0	25.0	4.5	1.0	0.5	Laryngitis.
12800	65.0	4.0	25.0	3.5	2.0	0.5	Chronic gastroenteritis.
15000	68.0	6.0	20.0	4.0	1.5	0.5	Toxemia.
15400	62.5	6.0	25.0	5.0	1.0	0.5	Conjunctivitis.

CHART 1.—CONTINUED.

White Cells.	Polynuclears.	—Lymphocytes—		Transi- tional.	Eosino- phils.	Mast Cells.	Diagnosis.
		Large.	Small.				
16000	68.0	6.2	22.9	2.4	0.2	0.3	Melancholia.
16200	63.3	7.0	26.0	3.0	0.5	0.2	Pernicious anemia.
16160	66.0	6.3	19.7	4.0	3.0	2.0	Conjunctivitis.
17760	69.0	5.0	23.5	2.0	0.5	...	Pelvic inflammation.
35520	68.8	6.6	19.0	2.0	3.6	...	Streptococcal mastoiditis.
18240	62.6	6.3	27.5	1.0	2.2	0.4	Angioneurotic edema.
22000	61.5	7.0	20.0	8.0	2.5	1.0	Constipation and anemia.
17920	69.0	7.0	21.0	1.4	1.0	0.6	Frontal sinus abscess (staphy- lococci).
.....	62.3	8.6	22.0	1.2	0.9	...	Gastric hyperacidity.
.....	63.0	7.4	27.0	1.0	1.6	...	Diabetes.
.....	58.0	8.9	27.3	4.0	1.8	...	...
15680	58.5	9.8	24.7	4.6	1.9	0.5	Iritis.
8400	56.8	7.8	28.0	6.0	1.1	0.3	Cervical adenitis. Tb.

CHART 2.—INFLAMMATORY LEUCOCYTOSIS (POLYNUCLEARS ABOVE 70 PER CENT.)

White Cells.	Polynuclears.	—Lymphocytes—		Transi- tional.	Eosino- phils.	Mast Cells.	Diagnosis.
		Large.	Small.				
.....	70.0	06.0	19.5	04.0	0.5	...	Acute fever, low.
11000	70.0	05.0	22.0	02.0	0.8	0.2	Tuberculosis.
12600	70.0	06.0	20.0	03.0	1.0	...	Strept. infec., nose ulcer.
22000	71.0	08.1	17.2	02.0	1.7	...	Kidney tuberculosis, mixed infec.
16640	72.0	08.6	13.6	04.0	1.8	...	Specific (?)
12800	72.0	07.8	16.0	04.0	0.2	...	Streptococcal acne.
16800	72.0	05.0	20.0	01.0	2.0	...	Acute conjunctivitis.
25600	72.0	06.0	19.0	02.0	1.0	...	Chronic gastroenteritis.
27600	74.0	02.5	17.0	05.0	1.5	...	Acute gastroenteritis.
17000	73.0	03.4	20.2	00.7	0.7	2.0	Arthritis deformans.
17450	74.0	07.0	10.0	08.2	0.8	...	Rheumatism.
5040	72.8	06.2	17.0	02.6	1.4	...	Cholecystitis.
18650	74.0	07.0	18.0	00.6	0.4	...	Angioendothelioma of omentum.
.....	74.0	07.6	15.2	03.2	...	...	Ius tube.
21840	84.0	06.0	03.6	05.0	1.4	...	Cancer of omentum (?)
.....	80.0	03.0	16.0	00.6	0.4	...	Pelvic abscess.
.....	82.6	02.4	15.0	...	...	...	Pelvic abscess.
21960	81.0	06.0	10.0	00.3	2.7	...	Appendicitis.
29900	73.0	10.0	10.0	05.0	1.5	0.5	Appendicitis.
28500	.....	.....	.....	.....	.....	.....	Appendicitis.
35520	79.5	08.0	09.4	02.3	0.6	0.2	Abdominal abscess from appendix.
25000	80.0	04.0	08.0	05.0	1.0	2.0	Meningitis.
.....	80.8	04.0	15.0	.....	0.2	...	Acute cystitis.
36270	86.0	06.0	06.0	02.0	...	...	Acute rheumatism (?)
.....	81.0	05.8	09.0	04.0	0.2	...	Acute rheumatism (?)
19600	85.0	03.0	09.0	00.3	0.7	...	Septicemia.
17920	86.0	04.4	08.5	00.5	0.6	...	Septicemia.
27200	85.0	03.0	08.0	04.0	...	...	Malignant endocarditis.
.....	83.0	04.0	11.1	01.0	0.9	...	Abscess.
34800	80.0	04.0	01.3	02.0	1.0	...	Abscess.
.....	76.7	09.3	08.2	03.7	1.5	0.6	Abscess.
.....	82.7	06.4	09.4	00.5	0.4	0.6	Mastoid abscess.
17000	86.0	03.5	08.0	01.0	1.0	...	Typhoid perforation.
14080	74.0	05.0	19.0	.....	2.0	...	(After operation.)
23520	76.8	07.6	12.5	03.0	0.1	...	Appendicitis, with tubercular peritonitis.
.....	77.0	03.4	17.7	01.3	0.6	...	Sepsis.
24500	71.2	06.4	20.0	.....	2.4	...	Necrotic fibroid.
52000	79.2	06.1	08.8	05.7	0.2	...	Ovarian cyst, twisted pedicle, necrotic.
21850	.....	.....	.....	.....	.....	...	Suppurating knee joint.
17920	69.0	07.0	21.0	01.4	1.0	...	Frontal sinus abscess with brain abscess.
20400	75.2	07.0	12.0	04.1	1.5	0.2	Mastoid and brain suppuration.
.....	77.5	03.4	17.0	01.5	0.6	...	...
.....	82.5	11.0	05.3	01.2	...	...	Supp. appendicitis.
29040	85.5	04.0	09.1	01.5	...	...	Abdominal abscess.
48640	90.0	03.4	04.8	01.8	...	...	Abdominal abscess.
.....	75.0	05.0	17.4	02.0	0.2	...	Abdominal abscess.
22000	81.5	08.1	07.2	02.4	0.4	0.4	Pleural abscess.
ANOMALIES.							
10533	27.1	18.6	22.1	26.5	5.7	...	{ Severe mastoid and lateral sinus infec- tion; streptococci.
13416	.....	.....	.....	.....	.....	...
35520	69.0	07.0	21.0	01.4	1.0	0.6	
27000	60.0	12.0	17.3	08.0	1.7	1.0	Old abdominal abscess.

CHART 3.—LARGE LYMPHOCYTOSIS (NORMAL 4-8 PER CENT.)

White Cells.	Polynuclears.	—Lymphocytes—		Transi- tional.	Eosinophils.	Mast Cells.	Diagnosis.
		Large.	Small.				
15920	72.0	8.0	8.0	11.0	...	1.0	Typhoid.
28160	65.0	8.7	23.0	0.9	2.4	...	Typhoid.
28880	57.0	21.5	18.6	2.9	...	...	Typhoid.
11360	36.0	30.0	4.5	29.0	0.5	...	Typhoid.
.....	61.4	14.0	20.0	4.3	...	0.3	Typhoid.
.....	58.0	8.9	27.3	4.0	1.8	...	Typhoid.
.....	46.2	10.6	22.7	20.0	0.5	...	Typhoid.
.....	56.0	18.0	17.0	8.0	1.0	...	Typhoid.
12800	57.0	11.8	24.4	6.0	...	1.1	Typhoid.
5400	65.0	14.5	12.0	6.5	1.0	1.0	Typhoid.
13216	65.5	18.7	10.4	5.0	0.4	...	Typhoid.
40000	56.0	17.0	15.0	11.0	0.5	...	Typhoid.
33920	56.0	15.0	8.0	17.0	3.6	0.4	Typhoid.
42720	57.0	14.5	14.3	9.4	4.8	...	Typhoid.
29920	60.5	15.7	11.0	8.3	4.5	...	Typhoid.
25040	53.0	17.0	16.5	12.0	1.5	...	Typhoid.
12000	39.7	17.0	40.0	1.0	1.0	0.3	Typhoid.
.....	44.0	17.0	19.0	2.0	18.0	...	Intestinal disturbance.
14000	50.0	11.4	30.7	3.0	0.6	4.3	Intestinal disease.

CHART 3.—CONTINUED.

White Cells.	Polynuclears.	—Lymphocytes—		Transitional.	Eosinophils.	Mast Cells.	Diagnosis.
		Large.	Small.				
17600	31.0	20.0	29.0	9.0	10.0	1.0	Intestinal disease.
.....	31.0	20.0	28.0	10.0	10.0	1.0	Intestinal disease.
11120	50.0	12.6	24.4	9.0	2.7	1.3	Cholecystitis.
.....	55.6	13.0	29.0	1.9	0.5	...	Slight fever.
.....	40.0	14.0	37.2	7.0	1.8	...	Child, low fever.
.....	58.0	10.0	25.0	7.6	0.4	...	Acute gastroenteritis.
7440	65.0	12.0	22.0	0.5	0.5	...	Chlorosis.
14640	60.7	20.6	15.7	3.0	0.5	0.5	Splenic anemia.
1840	47.5	16.0	35.0	1.0	0.5	...	Hodgkin's disease.
15320	60.0	13.0	24.0	2.0	1.0	...	Angiosarcoma, abdominal.
20000	59.0	16.0	20.0	2.4	1.4	1.2	Mastoid abscess.
10533	27.1	18.6	22.1	26.5	5.7	...	Mastoid abscess.
27000	60.0	13.3	16.0	8.0	1.7	1.0	Old abdominal abscess.
16160	62.0	10.5	22.0	2.2	3.3	...	Potts' disease.
47000	65.0	22.0	13.0	...	...	...	Osteitis.
14900	62.5	12.0	22.5	2.0	1.0	...	Degenerative neuritis.
8320	50.5	10.0	32.5	4.5	1.8	...	Hysteria.
15790	56.4	18.3	15.3	10.0	1.4	...	Specific.
.....	70.0	14.0	15.0	0.7	0.3	...	Specific.
.....	62.0	11.0	22.0	4.5	0.5	...	Specific.
20480	66.0	16.2	15.0	0.8	2.0	...	Specific.
14800	57.3	21.0	11.3	6.3	4.1	...	Specific.
12300	50.0	13.6	30.0	3.4	3.1	...	Specific.
11400	63.0	10.0	20.0	5.0	2.0	...	Specific.
16400	58.0	14.0	17.2	6.8	2.4	1.6	Specific.
.....	42.0	8.8	37.6	9.9	1.7	...	Specific.
.....	52.0	15.5	23.2	9.0	...	0.3	Typhoid.
10320	45.7	26.2	18.3	7.6	1.2	1.0	Malaria.

CHART 4.—DIFFERENTIAL BLOOD COUNT IN TYPHOID

White Cells.	Polynuclears.	—Lymphocytes—		Transitional.	Eosinophils.	Mast Cells.	Widal.
		Large.	Small.				
3000	57.0	7.0	33.5	2.5	...	...	Faint.
8000	60.0	4.0	28.0	6.0	1.5	0.5	Positive.
8000	...	...	...	...	...	...	Positive.
8800	57.0	21.5	18.6	2.9	...	...	Positive.
.....	69.0	3.0	28.0	...	...	...	Positive.
.....	46.2	10.6	22.7	20.0	0.5	...	Positive.
11400	...	...	...	...	...	...	Positive.
.....	57.4	11.8	28.7	2.1	...	...	Positive.
.....	56.1	18.3	17.0	8.6	...	...	Positive.
16240	...	...	...	...	...	...	Positive.
17000	86.0	3.5	10.5	...	...	...	Perforation.
14080	74.0	6.0	20.0	...	...	...	After operation, positive.
5400	65.0	14.5	12.0	6.5	1.0	1.0	Positive.
15920	72.0	8.0	8.0	11.0	1.0	1.0	Moved, positive.
14240	...	...	...	...	...	...	...
13216	65.5	18.7	10.4	5.0	0.4	...	...
14560	...	...	...	...	...	...	...
40000	56.0	17.0	15.0	11.5	11.5	...	...
33920	56.0	15.0	8.0	17.0	3.6	0.4	...
42720	57.0	14.5	14.3	9.4	4.8	...	...
29920	60.9	15.7	11.0	8.3	4.5	...	...
25040	53.0	17.0	16.5	12.0	1.5	...	...
28160	65.0	8.7	23.0	0.9	2.4	...	Hemorrhage.
12000	39.7	17.0	40.0	2.0	1.0	0.3	Convalescence.
12800	57.0	11.8	24.1	6.0	...	1.1	Positive.
11360	36.0	30.0	4.5	29.0	0.5	...	Positive.
.....	61.4	14.0	20.0	4.3	...	0.3	Positive.
.....	58.0	8.9	27.3	4.0	1.8	...	Positive.
.....	56.0	18.0	17.0	8.0	1.0	...	Positive.
.....	52.0	15.5	23.2	9.0	...	0.3	Positive.

CHART 5.—SMALL LYMPHOCYTOSIS (NORMAL 20-30 PER CENT.)

White Cells.	Polynuclears.	—Lymphocytes—		Transi- tional.	Eosino- phils.	Mast Cells.	Diagnosis.
		Large.	Small.				
.....	48.5	9.0	40.0	1.5	1.0	...	Toxemia.
19000	57.0	3.0	35.0	3.0	2.0	...	Pruritis.
1840	47.5	16.0	35.0	1.0	0.5	...	Hodgkin's disease.
.....	36.0	9.0	39.0	10.0	6.0	...	Pernicious anemia.
18000	51.0	5.4	38.0	2.1	3.5	...	Specific.
.....	47.0	5.0	46.0	...	2.0	...	Specific.
6048	40.2	14.0	37.0	7.0	1.8	...	Continued fever.
.....	37.5	12.0	47.0	13.2	0.3	...	Typhoid.
.....	57.0	7.0	33.5	2.5	...	...	Typhoid.
12000	39.7	17.0	40.0	2.0	1.0	0.3	Typhoid convalescence.
.....	58.0	4.5	34.0	2.8	0.7	...	...
9920	45.0	9.0	36.3	6.4	2.2	1.1	Lymphangitis, followed by exophthalmic goiter.
.....	26.0	10.0	61.0	1.0	1.0	1.0	Lymphangitis, followed by exophthalmic goiter.
.....	56.0	3.0	35.0	5.5	0.5	...	Lymphangitis, followed by exophthalmic goiter.
.....	48.4	1.7	45.9	2.5	1.5	...	Lymphangitis, followed by exophthalmic goiter.
11520	63.0	6.0	22.0	8.0	1.0	...	Lymphangitis, followed by exophthalmic goiter.
.....	67.0	3.0	28.0	1.0	1.0	...	Lymphangitis, followed by exophthalmic goiter.
.....	42.0	8.8	37.6	9.9	1.7	...	Specific.
26880	56.0	9.0	31.5	2.5	1.0	...	Noma.

CHART 6.—TRANSITIONAL CELL EXCESS (NORMAL 2-4 PER CENT.)

White Cells.	Polynuclears.	—Lymphocytes—		Transitional.	Eosinophils.	Mast Cells.	Diagnosis.
		Large.	Small				
11520	63.0	6.0	22.0	8.0	1.0	...	Exophthalmic goiter.
.....	36.0	9.0	39.0	10.0	6.0	...	Anemia, pernicious.
22000	61.5	7.0	20.0	8.0	2.5	1.0	Constipation.
17450	74.0	7.0	10.0	8.2	1.8	...	Lumbago.
17600	31.0	20.0	29.0	9.0	10.0	1.0	Specific.
15750	56.0	18.5	14.1	10.0	1.4	...	Specific.
10533	27.1	18.6	22.1	26.5	5.7	...	Severe lateral sinus inf.
27000	60.3	13.0	16.0	8.0	1.7	1.0	Abdominal abscess walled off.
.....	46.2	10.6	22.7	20.0	0.5	...	Typhoid.
.....	56.1	18.3	17.0	8.6	...	...	Typhoid.
5400	65.0	14.0	12.0	6.5	1.0	1.0	Typhoid.
15920	72.0	8.0	8.0	11.0	1.0	...	Typhoid.
13216	65.5	18.7	10.4	5.0	0.4	...	Typhoid.
40000	56.5	17.0	15.0	11.0	0.5	...	Typhoid.
42720	57.0	14.5	14.3	9.4	4.8	...	Typhoid.
29920	60.5	15.7	11.0	8.3	4.5	...	Typhoid.
25040	53.0	17.0	16.5	12.0	1.5	...	Typhoid.
.....	52.0	15.5	23.2	9.0	...	0.3	Typhoid.

DISCUSSION

DR. H. R. ALBURGER, Bloomington:—A statistical paper is useful, and a careful analysis of these cases must be of great value to those who are working in laboratories particularly, and to those men who are concerned in studying these cases from the laboratory standpoint. But I would call your attention to the fact that the average physician must depend upon the laboratory worker to make these compilations and to do this work for him. In the first place, in making a blood count, I find in my laboratory work a great many practicing physicians, skilful men, do not realize that the blood counting cannot be done in the laboratory 100 miles away from the case. It requires technical skill and repeated careful technical work to make a good blood count, and the physician who intends to follow up his cases to the ultimate careful clinical analysis must familiarize himself with the technic for making blood counts. The cardinal principles of blood counting are that a high leucocyte count indicates resistance to infection. In determining the percentages of various forms of leucocytes, we have a procedure which requires much experience. I find many men send in to me a clot of blood between two pieces of glass and ask for a differential blood count. Now, it is impossible to make a differential blood count under such circumstances, as it requires the most careful technic. I believe one of the most important of all procedures necessary is a clean glass, on which the blood is carefully smeared. I find a great variation in the appearances of the various leucocytes in different conditions of the slide, upon which the smear is made. In the second place it requires absolutely uniform smearing. Anyone who is familiar with laboratory work knows what a difficult thing it is to make a careful differential count where the smear is thin at one end and thick at the other. With the Wright stain we have great difficulty in recoloring in getting out the leucocyte. You will often have a different appearance of the same type of white blood-cell at two ends of the same slide, owing to the different thickness of the smear and the different affinity for the stain. These are purely

technical points, but of great importance in determining results. I have seen all sorts of statistical results brought out by men who are not skilled in this work. No means of laboratory diagnosis should be overlooked by any practicing physician whenever it is possible for him to have access to them. These means should be put into the hands of those who are accustomed to that kind of work, in order to obtain good results.

We have to consider all sorts of factors in obtaining results, and that is one justification for the clinical pathologist's existence. He can do something by his specialized work for the general practitioner, which the latter cannot do for himself. Late statistical results are a sure justification for a careful analysis of these cases, and I believe firmly that the prognosis can be, and in many cases should be, influenced by these blood findings. I believe in some cases small minor differences of counts are overestimated. When we consider that we are dealing with a small object, and the purely mechanical handling of these corpuscles may alter the relative proportions, I think minor differences of percentages may be safely overlooked. But for such diseases as leukemia, both the splenic and lymphatic forms, for serious infections and for the determination possibly of the prognosis in cases of advanced tuberculosis, and even, of course, in parasites of the intestinal tract, we know that the eosinophile count is of great value.

I wish to compliment Dr. Rhamy on his careful analysis.

DR. H. H. THOMPSON, Noblesville:—I wish to discuss this paper from the standpoint of the ordinary practitioner. A laboratory analysis of the blood may take in various features that may not be carefully weighed and found by the ordinary practitioner. Those of us who make our own smears are apt to find that the blood at one end of the slide is thicker than it is at the other end of it, and I wish to emphasize that fact in connection with the differential count, and how much it means to anyone who will take the least time and trouble to look into the matter.

With regard to the importance of counting the lymphocytes, we all recognize the fact that

lymphocytes in excess are merely an indication of resistance. They are indicators. Whether or not the body will be able to survive infection is not due to what we find in the excess or lessening of the lymphocytes, but when we go into the matter of the differential count we are able to make a better prognosis of the disease with which we have to deal. I call to mind a case that I examined only yesterday—a case of long-standing infection from a pus-tube. The polymorphonuclears sank below 60 per cent.; the lymphocytes rising to a little over 30 per cent. That woman is going to die. There is no question about that, and it is simply a matter of the differential count. That is where the ordinary man with the microscope and a plain glass slide is enabled to find out something about the lymphocyte. We are not much interested in this percentage and that percentage. We are interested for our own individual patients, as to whether we can make a correct prognosis, or whether we are going to be at fault in our prognosis, and it does not matter very much whether we get a few more leukocytes on one end of the slide or the other if we are able to differentiate between the class of leukocytes we find, and are able to read the results right. That is what is going to make a difference with all of us. We do not care whether there is an increase in the eosinophiles or not. Of course, they will have some bearing upon the proposition; but we all realize that an increase in leukocytes means that the body is throwing out in every direction the best it has, to combat infection, with which we have to deal, and with the differential diagnosis we are enabled to know whether or not we are going to get the better of that infection.

DR. A. C. KIMBERLIN, Indianapolis:—Just a word or two in regard to the relative value of the numerical counts and the differential, as an aid to diagnosis. Certainly this is one reliable means which we have for one who is operating, and for one who is familiar with the technic and experience in clearing up, sometimes, what would otherwise be impossible in the way of diagnosis. Let us take a case of incipient tuberculosis. Frequently we find a condition of obscure type, or we will have a low grade of infection in which it is a matter of considerable importance in the way of diet or advice to the patient to make a diagnosis. Now, the numerical count is not reliable unless you are able to estimate correctly the amount of resistance or vital force of the patient himself.

As stated by Dr. Thompson, there is a direct relation between the severity of the infection and the amount of reaction, and this is cleared up by the differential count. If you try to make a numerical count, if you have very marked changes, such as rapid depuration of the blood, and particularly a patient who is not well nourished, it is not wise to rely upon leukocytes, even

in a good specimen. It is reliable as to the number and kind of variety of cells which you find in making the differential count. Take a differential count of 95 to 96, and it certainly means a bad prognosis always. In other words, it is not possible for a man engaged in general practice to be familiar enough to make a reliable estimation of the blood-cells. Furthermore, it is not a good idea to change from one man to another, even though he is experienced, because there is no condition in which the personal equation is such a factor in determining the value of the findings. A differential count with estimation of the hemoglobin, associated with a good medical history, makes certainly one of our most valuable means of arriving at a correct diagnosis early.

DR. RHAMY (closing):—The main object in presenting this paper is that brought out by Dr. Alburger, in regard to the relation of the laboratory man to the physician. Ordinarily a specimen is sent to the laboratory, with the request to make a blood examination and report. Now, in order to get results, the laboratory man should be considered in the nature of a consultant, and he should have at all times a history of the case, and be enabled to confer with the clinician with regard to his findings and the clinical findings. I will refer to one case covering this point.

I was called to make a blood examination in a case in which typhoid fever was suspected. The only symptoms were extremely high irregular temperature. There was no pain, but the pulse was 160. I made a differential count and found the leukocytes 27,000. In discussing the case with the physician I suggested that in view of the fact that there was no pain there must be a deep-seated abscess, and suggested the possibility of abscess of the liver or endocarditis. In a few days the patient developed a marked malignant endocarditis, which resulted in an embolism of one of the extremities, requiring amputation, and the case terminated fatally.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from Page 205, Vol. III)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

STEVENS, THADDEUS M.—Indianapolis (1829-1885). S. T. 1886, 207. Born, reared and died in Indianapolis. Was professor of toxicology, medical jurisprudence and chemistry in the Indiana Medical College in 1870. In 1874, occupied the same chair in the College of Physicians and Surgeons. For a time he was editor of the Indiana Medical Journal. He was the first secretary and executive officer of the State Board of Health. He was prominent in all reforms tending to advance the profession of the state. He contributed a number of papers to the State Society:

"The Treatment of the Criminal Insane," Trans. 1871, 193; "Medicolegal Science," Trans. 1872, 51; "Report on Medical History of Indiana," Trans. 1874, 17; "State Boards of Health," Trans. 1875, 65; "Report of Public Hygiene in Indiana," Trans. 1878, 67; "Sanitary Survey of Indianapolis," Trans. 1880, 193; "State Medicine," Trans. 1881, 23; "The Need of Hospitals in Indiana, Constructed and Controlled by State Authority," Trans. 1882, 56; "Dr. Stevens vs. State Board of Health," Trans. 1883, 70; "The Relative Value of Bovine and Humanized Vaccine Virus, Practically Considered," *ib.*, 213; "Report of Committee on Medical Legislation," *ib.*, 239; and "Report of Committee on State Medicine," Trans. 1884, 24. See Stone, 682, and Robson, 341. Obituary, *I. M. J.*, Vol. iv, 109.

STEWART, JOHN L.—New Albany (1835-1898). *S. T.* 1899, 386.

STILLSON, JOSEPH.—Bedford (1815-1885). *S. T.* 1886, 204.

STILLWELL, JOSEPH A.—Brownstown (1831-1894). *S. T.* 1895, 401.

STOCKWELL, SARAH F.—South Bend (1841-1904). *S. T.* 1904, 362.

STRONG, JOHN T.—Plainfield (1840-1895). *I. M. J.*, Vol. xiv, 142.

SUTTON, JAMES A.—Argos (1840-1893). *S. T.* 1894, 216. Served as a private soldier from August, 1862, to July 19, 1865, in the Fifth Reg. Ind. Cav. Studied medicine after his return home.

SUTTON, WILLIS E.—Aurora (1848-1879). *S. T.* 1880, 242.

SUMAN, WILLIAM.—Anderson (1829-1898). *S. T.* 1899, 393.

SUMMERS, OSA R.—Middletown (1874-1904). *S. T.* 1905, 458.

SWAFFORD, BENJAMIN F.—Terre Haute (1832-1901). *I. M. J.*, Vol. xix, 318. Was surgeon of the Eleventh Reg. Ind. Cav.

SWARTS, DAVID J.—Auburn (1832-1905). *S. T.* 1905, 459. He enlisted in the 100th Reg. Ind. Vols., was commissioned a lieutenant, and later assistant surgeon of same regiment.

TAGGART, SAMUEL C.—Charlestown (1828-1901). *S. T.* 1901, 500.

TEAL, NORMAN.—Kendallville (1829-1899). *S. T.* 1899, 403. Dr. Teal was assistant surgeon of the Eighty-eighth Reg. Ind. Vols. from Aug. 30, 1862, until the regiment was mustered out of service. *I. M. J.*, Vol. xvii, 405.

TERRILL, WILLIAM H., SR.—Petersburg, Ky. (1829-1885). *S. T.* 1886, 210.

TERRILL, WILLIAM H., JR.—Lawrenceburg (1852-1887). *S. T.* 1888, 200.

THOMAS, ANDREW J.—Evansville (1840-1898). Was an ex-superintendent of the Southern Indiana Hospital for the Insane. See *I. M. J.*, Vol. xvii, 36, for interesting memoir by Dr. E. C. Reyer.

THOMAS, MARY F.—Richmond (1816-1888). *S. T.* 1889, 210. Dr. Thomas was a faithful worker in everything that aimed to make the human race better. She was an industrious writer and contributed a number of articles to the State Medical Society: "Women Physicians in Hospitals for Insane Women," Trans. 1880, 184; "Report of Committee Regarding the Employment of Female Physicians in Hospitals for the Insane,"

1882, 80; "The Influence of the Medical Colleges of the Regular School of Indianapolis on the Medical Education of the Women of the State," 1883, 228; "Women Physicians for Insane Women," 1884, 203; "Some Thoughts on Post-Partum Hemorrhage," 1885, 125; and "Heredity," 1887, 97.

THOMAS, WARREN H.—Elkhart (1837-1906). *S. T.* 1907, 481.

THOMAS, WILLIAM H.—Indianapolis (1834-1903). *I. M. J.*, Vol. xxii, 189.

THOMPSON, DANIEL A.—Indianapolis (1862-1904). *S. T.* 1905, 460. Dr. Thompson was a native of Rush county, Indiana. As a specialist in diseases of the eye he took a high rank. In 1890 he succeeded to his father's position as professor of diseases of the eye, in the Medical College of Indiana. Dr. Thompson was noted for his charity work to the poor, and was a favorite with his pupils. "He was not a frequent writer, but he was a clear and forceful teacher, both didactic and clinical—an actor rather than a declaimer in the drama of our profession." His article on "The Iris," Trans. 1891, 195, is a most excellent contribution to our medical literature. See *I. M. J.*, Vol. xxiii, 205. (Picture.)



ROBERT N. TODD.

THOMPSON, JOHN H.—Otterbein (1817-1883). *S. T.* 1884, 215.

THOMPSON, JOHN J.—Sullivan (1824-1899). *S. T.* 1899, 406. *I. M. J.*, Vol. xvii, 405.

THOMPSON, WILLIAM C.—Indianapolis (1812-1897). He was present at the formation of the State Medical Society in 1849. He practiced at several places before finally locating permanently at Indianapolis. He was commissioned surgeon of volunteers by President Lincoln. For several years he was a member of the State Legislature. He had retired from active practice. See Stone, 688, with portrait. Also *I. M. J.*, Vol. xv, 470.

THORNE, J. C. F.—Kokomo (1857-1908). *J. I. S. M. A.*, Vol. i, 330.

TILFORD, SALEM A.—Martinsville (1827-1893). *S. T.* 1894, 221.

TILLSON, HOSEA.—Centerville (1830-1902). S. T. 1903, 356. Dr. Tillson was a faithful soldier, and later assistant surgeon, in the Fifty-seventh Reg. Ind. Vols.

TINGLEY, URIAH B.—Harrisburg (1816-1899). I. M. J., Vol. xvii, 324.

TODD, LEVI L.—Indianapolis (1830-1901). S. T. 1902, 425. See also I. M. J., Vol. xx, 226; Stone, 690. He contributed to the Transactions, "The Therapeutic Properties of Opium," 1877, 79; and "Modern Therapeutics," 1886, 123.

TODD, ROBERT N.—Indianapolis (1827-1883). S. T. 1884, 209. Born in Kentucky, he came with his parents to Indiana in 1834. He graduated at the Indiana Central Medical College in 1850. Practiced for a time at Southport. Was surgeon of the Twenty-sixth Reg. Ind. Vols. In 1869 he was chosen as teacher of theory and practice, in which he continued until the spring of 1874, when he was assigned to the same department in the College of Physicians and Surgeons until 1878, when he was elected to the chair of principles and practice of medicine, which he continued to hold until his death. Was elected president of the State Medical Society in 1870, and presided in 1871. The presidential address was on "The Medical Profession and the Administration of Justice," Trans. 1871, 1. See Stone, with portrait, 510. See I. M. J., Vol. ii, 65.

TOMS, ALPHIUS.—Goshen (1841-1906). I. M. J., Vol. xxv, 297. A veteran of the Civil War.

TREMBLEY, G. D.—Bippus (1846-1888). S. T. 1889, 209.

TROWBRIDGE, WILLIAM V.—Burnetts Creek (1833-1897). S. T. 1898, 374.

TUCKER, THOMAS M.—Salem (1828-1895). S. T. 1896, 257.

TURNER, GEORGE W.—Freedom (1864-1900). S. T. 1901, 501. Served for some time in the hospital corps in a Porto Rican hospital.

VAN BUSKIRK, AARON E.—Fort Wayne (1847-1904). S. T. 1904, 364. In the Fort Wayne College of Medicine he was for a number of years an active member of the faculty, and taught at various times the following branches: anatomy, physiology, pathology, surgery, theory and practice, and diseases of the nervous system. See I. M. J., Vol. xxii, 417.

VAN METER, ISAAC N.—Florida (1849-1899). S. T. 1900, 340.

VAN NUYS, S. C.—Bloomington (18—1898). He was for many years at the head of the department of chemistry in the State University, Bloomington. While there he wrote a text-book on the analysis of the urine.

VICKREY, ABSALOM M.—Tipton (1822-1886). S. T. 1886, 212.

VICKREY, MARTIN V. B.—Tipton (1838-1897).

VINCENT, HENRY C.—Guilford (1826-1891). S. T. 1891, 287; and 1892, 280. Was assistant surgeon for a time in the Eighty-third Reg. Ind. Vols.

WALKER, DAVID R.—Lebanon (1844-1902). S. T. 1902, 426.

WALKER, EDWARD.—Delphi (1829-1908). J. I. S. M. A., Vol. i, 112.

WALKER, GEORGE B.—Evansville (1807-1887). S. T. 1888, 206.

WALKER, ISAAC C.—Indianapolis (1828-1906). Dr. Walker first practiced in Peru, and removed to Indianapolis in 1872. He was professor of diseases of

the mind and nervous system in the Indiana Medical College for thirty-three years. I. M. J., Vol. xxv, 195.

WALKER, JAMES K.—Loogootee (1842-1887). S. T. 1887, 197. Served through the Civil War as a Confederate soldier, and came from Kentucky to Loogootee in 1871, where he continued to practice until a short time before his death.

WALKER, JOHN C.—Indianapolis (1828-1883). He was for a time editor of the *Laporte Times*. In 1853 was elected to the State Legislature. In 1855 became a joint owner of the Indianapolis *Sentinel*. He went to the front as colonel of the Thirty-fifth Reg. Ind. Vols., and served one year in that capacity. In 1879 he was appointed assistant physician in the Indiana Hospital for the Insane, but died soon after from hasty consumption. Condensed from Stone, 521.

WALL, DAVID.—Indianapolis (1836-1903). I. M. J., Vol. xxi, 440.

WALTER, C. G.—Lawrenceburg (1820-1895). S. T. 1896, 252.

WARDNER, HORACE.—Laporte (1829-1905). S. T. 1905, 461. Served as a surgeon in several capacities with Illinois regiments in the Civil War.

WASHBURN, ISRAEL B.—Rensselaer (1838-1903). I. M. J., Vol. xxii, 287. Was surgeon of the Forty-sixth Reg. Ind. Vols. in the Civil War.

WASHBURN, ROBERT R.—Waldron (1833-1900). S. T. 1901, 502. Was a soldier of the Civil War.

WATERS, JOHN C.—Indianapolis (1830-1884). S. T. 1885, 222.

WATTS, EBER K.—Richmond (1854-1905). S. T. 1905, 462.

WEDDINGTON, SAMUEL C.—Jonesboro (1823-1886). S. T. 1886, 217. Dr. Weddington was assistant surgeon of the 147th Reg. Ind. Vols. He contributed the following named articles to the State Medical Society: "Cancer," Trans. 1877, 103; "A Case of Placenta Prævia," 1877, 119; "Kakonemia, or Pernicious Anemia," 1880, 35; and "Tumors of the Breast," 1885, 187. See Robson, 592.

WEEKS, JOSEPH.—Mechanicsburg (1820-1908). Practiced in Mechanicsburg from 1856 to date of his death. J. I. S. M. A., Vol. i, 477.

WEIST, JACOB R.—Richmond (1834-1900). S. T. 1900, 341. Dr. Weist was assistant surgeon of the Sixty-fifth Reg. Ohio Vols., and later was transferred to other Ohio regiments, where he served in the medical service until the close of the war. He was elected president of the Indiana State Medical Society in 1879, and presided at the session of 1880. He was professor of railroad surgery in the Indiana Central Medical College for a number of years. He contributed a number of papers to the State Medical Society, one of them being a prize essay of great value to the profession. All are found in the State Transactions: "A Contribution to the Statistics in Relation to Foreign Bodies in the Air Passages," 1867, 70; "The Causes, Nature and Treatment of Cerebrospinal Meningitis," prize essay, 1868, 123; "Report on Board of Public Charities," 1870, 129; "President's Address—Problems in Relation to the Prevention of Disease," 1880, 1; "Hot Water in Surgical Practice," 1882, 29; and "Civil Malpractice Suits; How Can the Physician Protect Himself Against Them?" 1884, 132. See Robson, 111.

WELBORN, GEORGE W.—Stewardsville (1844-1905). S. T. 1905, 463. Served in the hospital corps of the Sixtieth Reg. Ind. Vols.

WELDDON, SAMUEL J.—Covington (1801-1881). See JOURNAL, Vol. ii, p. 291.

WELMAN, RICHMOND M.—Jasper (1824-1884). S. T. 1884, 218. In 1861 he entered the military service as captain of Company K, Twenty-seventh Reg. Ind. Vols. Later he was commissioned surgeon of the Ninth Reg. Ind. Cav., and served in that capacity until the close of the war.

WERMUTH, ADOLPH F.—Ft. Wayne (1877-1901). S. T. 1902, 427.

WEST, VINCENT T.—Princeton (1812-1889). S. T. 1889, 217.

WHITCOMB, JAMES H.—Indianapolis (1840-1893). S. T. 1894, 217.

WHITE, J. F.—Kosciusko county (1857-1883). S. T. 1883, 277.

WHITESSELL, PHILIP P.—Clarksville (1823-1896). S. T. 1896, 264. For a time in the Civil War, was captain of Company E, Thirty-ninth Reg. Ind. Vols., and afterwards assistant surgeon, and surgeon of the 101st Reg. Ind. Vols.

WICKERSHAM, NOAH L.—Anderson (1827-1897). S. T. 1897, 356. Dr. Wickersham was a fitting type of the "old school" of physicians. Dr. Jonas Stewart has given a most excellent sketch of him in the Transactions. See I. M. J., Vol. xvi, 300. He wrote poetry of no mean character.

WILES, WILLIAM V.—Spencer (1827-1892). S. T. 1893, 252. Dr. Wiles was assistant surgeon of the Eighty-fifth Reg. Ind. Vols.

WILKINSON, JAMES J.—Orland (1842-1906). S. T. 1907, 491.

WILLIAMS, CHARLES S.—Columbia City (1842-1905). S. T. 1906, 489.

WILLIAMS, ELKANAH.—(1822-1888). It is not generally known that the justly celebrated ophthalmologist, the late Dr. Williams of Cincinnati was a native of Indiana. He was born in Lawrence county, Indiana, Dec. 19, 1822. He was a graduate of Asbury University, studied medicine at Bedford, graduated in medicine at the University of Louisville, 1850, and for the next two years was engaged in general practice in Indiana. In the spring of 1852 he located in Cincinnati, but soon went abroad to study ophthalmology. In the spring of 1855 he returned to Cincinnati, and commenced practice as an exclusive specialist in diseases of the eye and ear. He is said to have been the first physician in America who confined his practice strictly to these branches. As practitioner, author, and teacher, he has hardly been excelled. (For details of his work see Stone, 553).

WILLIAMS, HUGH T.—Rising Sun (1812-1879). S. T. 1880, 244. He participated in the chase of the rebel General, Morgan, through Indiana, and "was afterward complimented by Governor Morton for the gallantry and skill displayed on that occasion." He served one term in the legislature, representing Ohio and Switzerland counties.

WILLIAMS, JOHN.—Clay county (1811-1909).

WILLIAMS, JOSEPH B.—Grafton (1844-1901). S. T. 1901, 503.

WILLIAMS, LEROY B.—Deedsville (1847-1880). S. T. 1881, 230.

WILLIAMS, LEWIS.—Marion (1825-1906). S. T. 1906, 494.

WILLIAMS, T. B.—J. I. S. M. A., Vol. i, 29.

WILLIAMSON, W. T.—Fort Branch (1844-1908). J. I. S. M. A., Vol. i, 330.

WILSON, J. H.—Plymouth (1838-1899). S. T. 1900, 343. He contributed in 1897 an article on "The Early Treatment of Slight Injuries," Trans. 1897, 312. At this meeting he showed three links of a trace chain that had been driven into the chest of a man in 1866, and remained until his death in 1897, when they were discovered at a post-mortem examination. Report of case. I. M. J., Vol. xvi, 21. See ib., xviii, 237.

WILSON, ROBERT Q.—(1822-1902). S. T. 1902, 428.

WIMMER, JAMES M.—Marion (1853-1897). S. T. 1898, 383.

WINANS, HENRY C.—Muncie (1829-1884). He was for a time surgeon of the Twenty-fifth Reg. Ill. Vols.

WINTON, HORACE.—North Manchester (1831-1893). See Am. Biog. Hist. of Eminent and Self-made Men of the State of Indiana, 1880, Eleventh Dist., p. 80.



BENJAMIN S. WOODWORTH.

WINTON, ROBERT.—Muncie (1820-1885). S. T. 1886, 201. See also Am. Biog. Hist. of Eminent and Self-made Men of Indiana, 1880, Sixth Dist., p. 90.

WISHARD, JOSEPH M.—Greenwood (1838-1905). S. T. 1905, 464. Was surgeon of the Fifth Reg. Ind. Cav. For several months was a prisoner in Libby Prison.

WOODBURN, FREDERICK C.—Indianapolis (1866-1898). The records show that Frederick C. Woodburn, private Hospital Corps, United States Army, who gave his occupation as physician at the date of his enlistment, June 7, 1898, died Sept. 29, 1898, at General Hospital, Ponce, Porto Rico.—War Department, Jan. 12, 1910.

WOODBURN, JAMES H.—Indianapolis, 1822-1901). S. T. 1901, 504. For four years, 1860-1864, he was superintendent of the Central Hospital for the Insane. For eight years he was a member of the city council of Indianapolis. In 1884 he was elected president of the Indiana State Medical Society, and presided at session of 1885. His address was on the subject,

"Have We Really Advanced in Knowledge and Improved in Practice?" Trans. 1885, 1. See Stone, 704; I. M. J., Vol. xix, 444; on page 445 his picture is shown by the side of Dr. W. H. Wishard, for whom he was thought to be when he died suddenly in a street car in Indianapolis.

WOODEN, JOHN L.—Greensburg (1826-1886). S. T. 1887, 194. He was surgeon of the Sixty-eighth Reg. Ind. Vols. Was captured at Chickamauga and confined in Libby Prison for three months. After his release was made a brigade surgeon.

WOODEN, WILLIAM H.—Greensburg (1857-1903). S. T. 1903, 357.

WOODWORTH, BENJAMIN S.—Fort Wayne (1816-1891). S. T. 1892, 294. For forty years was a noted practitioner of Fort Wayne. Was elected president of the State Medical Society in 1860, and presided in 1861. He contributed the following papers to the State Society: "President's Address," Trans. 1861, 12; "Dysentery, as it Prevailed in Allen County, Indiana, 1864," Trans. 1865, 40. See Robson, 36.

WRIGHT, CHARLES E.—Indianapolis (1843-1893). S. T. 1893, 255. Dr. Wright had attained a well earned prominence in medicine when his life ended at the early age of 50. At the time of his death he was superintendent of the Central Hospital for the Insane. He had filled a number of official positions in the city of Indianapolis. He contributed a number of valuable papers to the State Society: "Purulent Aural Catarrh," Trans. 1870, 119; "Paralysis of Accommodation of the Eye," 1871, 93; "Diseases of the Eye and Ear," 1872, 67; and "Report on Diseases of the Eye and Ear," 1873, 22. Biography, I. M. J., Vol. xi, 279 (by Dr. W. B. Fletcher) and 281 (editorial). Stone (with portrait), 571. Excellent portrait, I. M. J., Vol. xi, facing p. 257.

WRIGHT, CHARLES H.—North Madison (1839-1889). S. T. 1890, 154. He was a soldier of the Civil War.

YOCKEY, DAVID H.—Richmond (1854-1904). S. T. 1905, 465.

YOHN, EDWIN F.—Valparaiso (1864-1906). S. T. 1906, 499.

YOHN, WILLIAM A.—Valparaiso (1850-1892). He was born in Porter county, March 29, 1850, and died at Valparaiso, August 12, 1892. He filled the chair of Science in the Normal School, at Valparaiso, for seventeen years. He was professor of Chemistry in the College of Physicians and Surgeons of Chicago, for five years. For several years he was secretary of the County Board of Health. Was a member of the Porter County Medical Society.—Dr. G. R. Douglas, Valparaiso.

YOUNKMAN, A. B.—Bremen (1835-1899). S. T. 1900, 344.

(To Be Continued)

A NEW MEANS FOR DIAGNOSIS AND TREATMENT OF DISEASES OF THE SIGMOID AND RECTUM.

FRANK W. FOXWORTHY, PH.B., M.D.
INDIANAPOLIS, IND.

In *The Jour. A. M. A.* for October 3, 1908, Dr. Granville S. Hanes, Louisville, Ky., demonstrated a new posture for the treatment of dis-

eases of the rectum and sigmoid. Several years previous to this in my clinical work in the dispensary of the Central College of Physicians and Surgeons, I was impressed by the great facility and ease with which the rectum was examined, as well as the enlarged field of observation when the patient was put in the knee-chest position. In order to secure this position for my private patients, so that it could be maintained for some time without inconvenience to the patient, I examined a large number of tables and chairs, both in this country and Europe, without finding any that would suit my needs. The requirements were: there should be sufficient inclining of the patient so that the force of gravity would draw the abdominal contents toward the diaphragm, thereby creating a suction in the lower bowel;



and this position to be maintained for sufficient time by the patient without discomfort or harm.

In December, 1906, I consulted a number of mechanical experts with this end in view, and in January, 1907, a table was begun, and completed in January, 1908, by Mr. Leonard, an expert with the W. D. Allison Company, Indianapolis. As it was impossible for me to have but one table in my office, several other postures were added, so that it could be used for the dorsal posture as well.

The essential points about the table are readily seen by the accompanying illustration, the firm padded top and leather pillow attached to the head rest so that it will not fall off when the patient is turning over, and a padded leather cushion support, ten inches wide, running the entire length of the table on the left side. The top of the table can be rotated on its longitudinal axis through an arc of about 45 degrees. Placing the patient in the Sim's position on the table

while it is horizontal and then rotating the top by means of the handle attached, the patient's weight is brought to bear on the side cushion, the knees and right arm and abdomen resting on it, while the entire left side of the patient is also supported by the top of the table, as it is shown by the accompanying illustration. There is no danger in this position of the patient falling over, as the center of gravity is always within the base supports. In this position the buttocks are the highest portion of the body and the least pressure of the fingers or speculum in opening the anus causes an inrush of air which renders the lower bowel easy for inspection. This position can be used for irrigation such as Dr. Hanes suggests, and it is an ideal method for inspection both for the operator and for the patient's comfort, for at any time the patient can raise his head, thereby



avoiding any dizziness or faintness. The position of the patient is absolutely under the control of the surgeon and the table can be stopped at any angle wished without any danger of slipping. For the convenience of the operator I have placed at the end of the table a receptacle for instruments and medicines which rocks out after the manner of a flour bin in a kitchen cabinet; the bottles for medicine are attached by steel clips and placed on a wooden slide which can be taken out at any time. The instruments are immediately behind the bottles and are also attached by steel clips to the back of the receptacle, while a wire gauze shelf holding a pound of absorbent cotton is in a convenient position in front of the bottles. Swinging trays as well as compartments are also placed in the lower portion of the table. So far I have not attached a light to the table, using a light attached to the wall, though it would be very easy to arrange one.

For the prone position I have placed a small extension at the end which can be easily removed, and for the dorsal position for examination and treatment of the rectum I have also attached removable stirrups.

I have tested the table with a person weighing three hundred and fifty pounds, and, having used it daily for over a period of two years, I believe it will meet the need for postures for rectal, colonic as well as vaginal work.

In the illustration the receptacle is removed in order to show the instruments, medicines and cotton in place.

THE RELATION OF PELVIC INFLAMMATION TO STRICTURE OF THE RECTUM.*

B. VAN SWERINGEN, M.D.
FORT WAYNE, IND.

The relation of pelvic inflammation to stricture of the rectum has been forced on my attention by several cases in the last few years and I have thought the subject of sufficient interest to present it to you this evening.

It is not my intention to discourse on the etiology of stricture of the rectum in general but to bring to your notice one cause of this condition which appears to me to be more common than has heretofore been stated.

Strictures of the rectum are usually divided into malignant and non-malignant. The former are usually carcinomata. The latter are looked upon as the result of syphilis and are treated as such. It is apparent, however, that any disease which induces ulceration in the rectum may be followed by a stricture because of the contraction of the new-formed connective tissue in the process of healing. The ulceration must, however, extend to the deeper coats of the bowel and not involve the mucous membrane only.

The first of the cases which directed my attention to this association occurred in the person of a married woman about 30 years of age. When I first saw her it was on account of the difficulty she experienced in obtaining a movement of the bowels. At this time the feces had to be fluid in order for her to have a passage at all. The uterus was fixed by inflammatory exudate in the pelvis but there seemed to be no large mass on either side and it was not thought at this time that the two conditions were associated. She had some evidences of old luetic infection such as scars of old sinuses the result of bone disease and she was

* Read before the Fort Wayne Medical Society, April 5, 1910.

put upon active antispasmodic medication which she bore well. In addition she was taken to the Lutheran Hospital where the rectal stricture was dilated. At the time of the dilatation a large amount of pus escaped which was thought to have been locked up above the stricture. She improved slowly but satisfactorily and gradually gained in weight and strength. The dilatation was kept up for several months at the office when she passed out of my hands. About a year subsequently she submitted to a laparotomy by a colleague who removed a left pus tube which had undoubtedly drained into the rectum and the ulceration about the tract in the rectal wall had, in my opinion, resulted in the stricture.

The second case was in the person of a married woman about 38 years of age who had been treated 14 years before for pelvic inflammation. From this illness she made a symptomatic recovery and remained well until the present trouble began, which consisted in abdominal pains and distress with a gradually increasing difficulty in obtaining a movement from the bowels unless the feces were liquid. Vaginal examination revealed a mass filling the pelvis which was so hard as to suggest fibroid or malignant disease. She refused operation and I subsequently learned employed several other physicians, growing continually worse, until she passed a considerable quantity of pus, mixed with blood, by the bowel. This was followed by improvement for a few days when the same thing happened again and her improvement continued until she became symptomatically well again. This history she related to me personally after her recovery. There was no evidence of syphilis in this case.

I have several times seen the wall of the sigmoid or rectum very much infiltrated and eroded when operating for pelvic disease and have no doubt but that this inflammatory process is capable of producing a stricture if continued long enough.

It is also a common observation to have the pus of a pyosalpinx find exit through the bowel which first adheres to the mass.

While in Philadelphia last week I took occasion to ask a number of operators whether they had ever met such a condition. Barton Cooke Hirst, Alfred C. Wood, Robert G. LeConte and John B. Deaver all replied in the negative. John G. Clarke had never seen it except in connection with syphilis. Lewis H. Adler, whose practice is limited to diseases of the rectum, said he had not met with such a sequence of events but believed it entirely probable that such cases occurred.

I have had the literature of the subject examined for a number of years back, with the following result:

J. L. Rothrock,¹ contributes a paper entitled "Stricture of the Rectum in Women Due to Inflammatory Processes in the Pelvis" in which he reports three cases of rectal stricture in women, in two of which there was no abscess formation; at least, if present it remained undetected and consisted probably in small foci of pus in the depths of the inflammatory mass. This may have been the cause of the long persistence of the inflammation. In the third case a diagnosis of pelvic abscess, probably pyosalpinx draining into the rectum, was made, though the opening into the bowel could not be seen. The stricture in this case was undoubtedly due to a perirectal infiltration about the tortuous sinus through which the pus had burrowed in its efforts to point, before it found its way into that canal. The stricture was located in all three cases in the upper third of the rectum, which has an anatomical basis. The rectum at this point is narrowest and fixed. The author refers to Rosthorn,² who calls attention to the fact that perirectal connective tissue fuses and forms its attachment at about this point, thus forming an upper limiting boundary of inflammatory exudation which extends from below upward. The close relation, too, of collections of pus in the left tube makes this a common point of perforation of the bowel. In case of perimetritic exudation the extension is direct between the planes of subserous connective tissue to the rectum, the exudate filling the entire space. In perimetritic processes such as accompany pyosalpinx the perirectal infiltration is more likely to be due to the burrowing of pus giving rise to a secondary and accompanying infiltration of the perirectal tissues which takes place by direct extension through the lymphatics from the focus of pus. A probable reason why stricture does not more frequently occur is that pressure alone from the size of the tumor seldom causes obstruction, and it would appear that only when there is considerable perirectal infiltration does obstruction result. In case of persistence of exudation, it may generally be regarded as indicative that a focus of pus is somewhere present in the mass.

Charles B. Kelsey³ contributes an article on "Double Stricture of the Rectum Caused by Plastic Exudation in the Pelvis." There was severe pelvic peritonitis followed by rectal stricture. On

1. St. Paul Med. Jour., 1902-4, pp. 314-318.

2. Velt's Handbuch of Gyn.

3. New York Med. Jour., 1887, pp. 46-435.

autopsy, between the uterus and the rectum there was an abscess cavity filled with black, sloughy material not suspected in life. This at some time had opened into the bowel both above and below the stricture, and accounted for the discharges of blood and pus of which the patient complained. About an inch and a half above the first stricture there was a second caused by a distinct band, which had twisted the bowel on itself and bound it firmly down to the top of the sacrum.

R. Peterson⁴ writes on the "Etiology of Non-malignant Stricture of the Rectum in Women."

A woman of 38 had had attacks of pelvic inflammation for 14 years. Pelvis filled with exudate, in which the uterus and the ovaries could not be distinguished by means of bimanual examination. On three occasions an abscess had been lanced through the vagina. Bowel obstruction the past four years. Rectal examination showed the bowel compressed against the coccyx by the pelvic mass. The uterus and appendages were removed through an abdominal operation. Recovery from the operation but rectal stricture recurred. Rectal examination six months after the operation revealed a stricture due to perirectal inflammatory tissue $2\frac{1}{2}$ inches above the anus. Colotomy refused and case lost sight of.

Biggs⁵ writes on "Obstruction of the Bowel by Pelvic Adhesions."

A woman of 35, tapped twice through the vagina and pus evacuated from the cul-de-sac. Intestinal obstruction. Autopsy. Extensive adhesions from the upper border of the uterus directly backward to the rectum completely closing off the pelvis below and the mass behind the uterus was an old abscess cavity filled with pus. Both tubes were quite small and the canal could not be followed, but the outer portion of the tube was considerably dilated and a probe could be passed from the dilated tube out through the fimbriated end into the abscess cavity. The visible cavity communicated with another abscess passing across behind the uterus. The origin of the trouble was tubal. A firm band of fibrous tissue, nearly half an inch thick, surrounded the middle portion of the rectum causing obstruction.

Duckworth and Champneys⁶ publish a paper entitled "Simple Stricture of the Rectum Following Upon Pelvic Inflammation."

A woman of 42 had suffered from pelvic inflammation after her first confinement $7\frac{1}{2}$ years previously. The uterus was flexed to the right. The rectal stricture was at the level of the reflection of the pelvic peritoneum and apparently resulted from the old perimetritis which occurred at the woman's first confinement $7\frac{1}{2}$ years ago.

M. F. Balzer⁷ writes of a case of abscess of the large ligament. Pelvic-peritonitis with pelvic abscess communicating with the bladder; stricture of the rectum.

John Cooper⁸ describes a non-malignant stricture of the rectum of five years' duration caused by ovarian abscess on which a lumbar colotomy was done followed by death and autopsy.

M. Rainer,⁹ "A Case of Rectal Stricture of Tubal Origin." This paper could not be found and therefore is not abstracted.

WHY IS THE COUNTRY DOCTOR?*

C. C. DuBois, M.D.

WARSAW, IND.

Mr. Toastmaster and Fellow Members of the Thirteenth District Medical Society:

I know not the reason that I was asked to respond to a toast this evening; certainly it was not that I have any great message or any burning words of wisdom of which I wish to relieve myself; much less it must be that I have been selected to entertain you, for I have made no reputation as a post-prandial speaker such as those who have preceded me enjoy. Were I to make the least effort in that direction you would be justified in describing my confusion and embarrassment by the lines:

"Trouble Nature heels o'er head, and yelling with the yelling street,
Set the feet above the brain, and swear the brain is in the feet."

I repeat that I come not as an entertainer, for the only really bright thing I have is the title of my toast and that is from the scintillations of our District Secretary.

But I must address myself to the topic, "Why Is the Country Doctor?" I have read that the noted Webster was in the habit of coming to an understanding of terms and conditions, of taking

7. Bull de la soc. anat., Paris, 1877, p. 402.

8. Trans. Path. Soc., London, 1870, pp. 21-190.

9. Bull. et Mem. d. Chir. d. Bucharest, 1907, pp. 10. 207-210.

* Toast at Banquet 13th District Meeting, Goshen, Ind., April 26, 1910.

4. Jour. Am. Med. Assn., 1900, pp. 34-259.

5. Med. Rec., New York, 1893, 43-153.

6. St. Barth. Hosp. Reports, 1905, London, 1906, pp. 41-158.

his latitude and longitude, before launching out upon a sea of oratory. So must we, even if we do not launch. By the term country there is implied the opposite, city; and with these two before you, you will readily surmise the remainder of my speech.

Country store, postoffice, laborer, lawyer, doctor, have been spoken of in the past with an accent of disparagement; country carried with it something of the rube, whether it were applied to laborer or professional men. Tempus, as you know, has not yet ceased to "fugit" and with it come unending changes of conditions and environment. Such have affected no part of our people more than those away from the great centers. With the excellent roads, daily mails, automobiles, telephones, telegraph, magazines and journals, and, above all, coffers well-filled with coin, the rube has, like the dragon fly, cast off the dull coat of sloth and emerged a country gentleman. The call "back to the farm," now heard on every hand is not entirely due to dollar and a quarter wheat and twelve dollar hogs nor to the lack of provisions, but it comes also from the fact that with growing opportunities of travel and education the man of the country, whatever his line, is measuring up with any class. And as others have emerged from out the sylvan shades of country life so has the country doctor; and if, therefore, you insist on the question, "Why Is the Country Doctor?" I must insist on the answer, "*He is not.*"

The question then becomes, why is the country doctor not a country doctor? The answer is because of the fitness of his primary medical education, because of the opportunities offered the profession outside the great cities along the line of medical books and journals, close touch with laboratories and specialists and also because of the influence of the county medical society.

Regarding the primary medical education of the country doctor, I may say that at the present time it is as good as the land affords, and if you consider the whole profession, I believe it compares favorably with that of the city doctor. I recently read that it is no longer tenable that cheap medical schools and therefore inferior ones must be maintained for furnishing doctors to the rural regions. It is no longer held that the graduates of the great schools of medical learning, such as Johns Hopkins, Rush, Columbia and Pennsylvania, must stop in the great centers in order to maintain their dignity in keeping with their high attainments. Kosciusko county does

not claim to be urban, but merely suburban to Goshen, yet we have graduates of Rush, Ann Arbor, Pennsylvania and Northwestern; two from Rush are in villages of less than 200. Henry S. Pritchert, president of the Carnegie Foundation at Washington, in a recent number of THE JOURNAL, A. M. A., cites specific instances of the graduates of Johns Hopkins, which furnishes the most classical medical education to be had in the United States, being in towns of 1,000, 900, 666, 364, and 200. Are these country doctors?

What of his opportunities in books? A man's working library, as you know, is not commensurate with the number of volumes in the city library. The country doctor's shelves usually contain standard works on practice, gynecology, obstetrics and the specialties, and these he makes his own. He becomes as familiar with them as a child does with a primer. Not infrequently we find also the larger works such as Osler's "Modern Medicine" or Keen's "Surgery" and their like. The advantages in periodicals do not seem great, for we do not have the larger files and indices in which the research worker delves. As a rule, the country doctor does not have access to the American Journal of Anatomy or of Physiology, to the *Anatomischer Anzeiger*, *His' Archives*, or the London *Lancet*. But, mark you, I myself have, or can get from a friendly competitor within one minute's walk of my office, *The Journal of the American Medical Association*, THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION, *The Archives of Internal Medicine*, the *Annals of Surgery*, the *New York Medical Journal* and *Progressive Medicine*. If then I be not abreast of the times in medical advance it must be due to my slothfulness, for certainly nothing of importance medically can crop out without its being discussed and elaborated within the journals mentioned. The work of Wright, Flexner, Calmette and others of like value and import have been put within the reach of every country doctor. And at least one paper read before this society in the last year contained researches from the Surgeon-General's Library at Washington.

What of the laboratory? Microscopes are common, but neither in city nor country does the practitioner depend on himself for the finer and more delicate manipulations. Not long ago we had in our society a man of great reputation and brilliant attainments tell us of the vaccine treatment, with a recitation of wonderful cures by the method; of the examination of the blood for red

and white cells, hemoglobin, for bacteria, and the determination of the opsonic index, and finally of the preparation of vaccines—autogenous vaccines. Of course, he meant that an expert laboratory man did all these things for him. I am within an hour's ride of the same laboratory, can write to its director in the morning and get an answer in the evening and can talk to him at any hour of the day for 25 cents. If then I fail to provide modern scientific laboratory methods for my patients it must again be due not to lack of facilities but to the lack of use of those at my command.

Under the present beneficent system of medical organization the county medical society offers fine chance for postgraduate work; and I am not certain but that the work done compares favorably with that of the academies of medicine in the cities. I have many times attended the Academy of Medicine in Cincinnati and think I rarely have seen one hundred present—an attendance of one to ten. Where were the rank and file? Kosciusko county has all but four of the eligible men in the society and had an average attendance last

year of 41 per cent. The county society furnishes us anew the fundamentals of all the branches made explicit and driven home by questions and answers, suggestions and discussions; thence one carries details of diagnosis and treatment, a point here that had slipped, a fact there that had jarred loose; the odds and ends are fashioned again for use and he secures a new inspiration for the days that are to come. There also comes that feeling of fellowship and good will that can only come from a proper understanding of the other fellow. In fact, in a county medical society with a full membership, with meetings well regulated and enthusiastic, where every member feels on a par with every other, a member should feel that next to his fireside and his church *that* is his home.

What then of the country doctor, with his opportunities in primary medical education, in books, journals and laboratories and under the blessings of a good county society? I have no quarrel with any man who has cast his lot in either a smaller or larger place than myself, but have merely wished to remind you that in city or country "man is man and master of his fate."

THE PRACTICE OF GYNECOLOGY. For Practitioners and Students. By W. Easterly Ashton, M.D., LL.D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Fourth edition, thoroughly revised. Octavo of 1099 pages, with 1058 original line drawings. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$6.50 net; half morocco, \$8.00 net.

The new edition of this popular work shows little actual increase in the number of pages, yet many new points have been added and some parts rewritten.

In the chapter on constipation mention is made of one of the newer drugs, viz., phenolphthalein, with a rather flattering comment on its efficiency. The section on indoor exercises has been changed sufficiently to conform to modern ideas of the relation of body form to abdominal and pelvic ptoses. More and more we are coming to a realization that the abdominal walls and the normal lumbar lordosis play an important rôle as supporters of the abdominal viscera. In fact, after man adopted the erect posture, it became imperative to look to these factors as substitutes for the sustaining ligaments of the viscera obtaining in the quadrupeds.

Contrary to his former teaching that the wearing of corsets predisposed to pelvic congestion and displacement of abdominal viscera, Dr. Ashton now has no hesitancy in recommending the modern straight-front

corset as a useful adjunct to the support of the abdominal organs, especially those below the umbilicus. This question of development of the natural body and abdominal support and the proper adjustment of the artificial ones, becomes of prime importance in the treatment of movable kidney.

Tucker's method of the treatment of erysipelas of the vulva by a saturated solution of magnesium sulphate is an important addition because of the universality of its applicability to this infection of other parts of the body. So enthusiastic is Dr. Ashton over this method of handling this affection that he ventures to call it a specific and we only hope that he is correct in the high estimate he places upon it.

For the relief of pelvic suppuration the author is paying more attention to vaginal evacuation than formerly.

In the operative treatment of ectopic gestation, the author places himself unreservedly in the class of those who would operate immediately upon the diagnosis being made.

Other changes to be noted are in the sections on tuberculosis of the genital organs, cystitis, and on the technic of abdominal and pelvic operations.

On account of its completeness and thorough detail this work justly deserves to stand where it always has, viz., among the very foremost works on gynecology in the English language.

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EDITORIALS

**ARTERIAL HYPERTENSION AND ITS
REDUCTION.**

Interesting indeed, from a therapeutic standpoint, are the results of Miller's experiments, published in the *Journal of the American Medical Association*, May 21, to determine the relative value of the different measures employed in the reduction of hypertension.

Needless to say, in order to arrive at the most efficacious measures, the exact etiology and accompanying pathology must be determined in each case, and this is by no means always an easy matter. Until we know more concerning the various underlying factors that may produce hypertension, our therapy must needs be more or less inexact. There are certain conditions which we do know, however, to be associated usually with increased blood-pressure, viz., chronic interstitial nephritis and sclerosis of the celiac axis or its branches, or of the thoracic aorta. The relation of arteriosclerosis to hypertension, on the other hand, is quite another question, for, as Dunin, Groedel and Elliott have pointed out, a very considerable degree of sclerosis in the palpable arteries may exist for some time without any hypertension, while, on the other hand, a very decided increase in the blood-pressure may exist without any apparent change in the coats of the vessels that are palpable. Indeed Elliott, in his excellent article in the May number of the *American Journal of Medical Sciences*, on "Arterial Hypertension," goes so far as to say that the two processes, arteriosclerosis and hypertension, do not by any means go hand in hand and when associated in the same individual, may only have an indirect relationship. He believes that the fact that in most cases of persistent high pressure some fibrosis of accessible arteries can be made out, has probably led us to overestimate the importance of arteriosclerosis in elevating blood-pressure. While stiff arteries may cause some increase in pressure, yet they cannot alone be held responsible for the high pressures often presenting. It is more than possible that when both conditions ob-

tain, the sclerosis results from the long continued strain on the vessel-walls produced by the increased tension, although ordinarily hypertension of marked degree is too rapidly fatal to permit of a marked development of arteriosclerosis. The factor responsible for high pressure in arteriosclerosis is probably a disturbance in the splanchnic circulation, whereby the reserve capacity of the splanchnic vessels is reduced. Hence it is that, as emphasized by Cook, the prognosis for a robust looking man of 55 with a blood-pressure of 200 mm. with no apparent arteriosclerosis is not as favorable as in a man of 65 with rigid arteries and a pressure of 135 mm., because the latter needs only fear an eventual cerebral or cardiac atrophy while the former may at any time suffer an apoplexy or heart failure. This condition of splanchnic sclerosis associated with high pressure is, according to Russell, the result of certain pressor toxins derived from the digestive apparatus, consequent upon an unnecessary intake with a decreased elimination. That toxins induce a spastic contraction on the splanchnic vessels and arterioles is offered by Barker as an explanation for the acute abdominal pain in the gastric crises of tabes.

Although the urinary findings may be much the same in the two conditions, yet a clear distinction must be drawn between arteriosclerotic renal atrophy and chronic interstitial nephritis, or true contracting kidney, for in one the prognosis for a relatively long number of years of existence may be given, whereas the latter condition admits only of an unfavorable prognosis from the start.

The first symptom of arterial hypertension may be vertigo or an acute attack of dyspnea, or nervous irritability, depression of spirits, disturbed sleep, or flatulency, constipation, headaches with vertigo. Precordial distress, dyspnea and nocturnal micturition are not uncommon early manifestations. Symptoms similar to those of cardiac asthma are not infrequent and denote insufficiency of the right heart. Enlargement of the heart is an almost constant accompaniment to continued hypertension, the first sound long and booming, the second aortic short and ringing, with a relative leak in the mitral valve where dilatation has progressed to any extent.

Miller's observations were confined to the direct effect on systolic blood-pressure of sweating, venesection and the various vasodilators. No attempt was made to classify the cases from an etiologic standpoint. Of the group of vasodilators, nitroglycerin, sodium nitrite and erythrol tetranitrate were tried, each on ten patients. The average dose, 1/100 grain, was the amount

of nitroglycerin selected for the test and was given in the form of a 1 per cent. alcoholic solution, dropped on the tongue. Seven of the ten patients reacted to the nitroglycerin by a fall in blood-pressure varying from 20 to 50 mm., the maximum fall in the majority of cases occurring within six minutes. Within thirty-five to forty minutes, however, the pressure had risen to within about 10 points of the original level. In two of the patients severe headache followed the administration of the nitroglycerin, and in none was there a subsequent rise of pressure above the previous level, as has been variously reported.

The effect of sodium nitrite in 2-grain doses in solution, was studied in ten patients. With this drug the average fall in pressure was greater than with nitroglycerin, made its appearance slightly later and returned to the previous level more slowly. Headache and other untoward symptoms were not observed in this series.

One-half-grain tablet of erythrol tetranitrate was chewed and swallowed by each of ten other patients. The average pressure fall was no greater than with sodium nitrite; but the maximum fall occurred earlier, was more prolonged and the return to normal more gradual. Severe headache, however, occurred in six, and one patient went into collapse.

A comparison of the effect of three drugs on the same patient at different times showed the nitroglycerin most prompt in its action, erythrol tetranitrate second, sodium nitrite third; the degree of fall strikingly similar in all three; and erythrol tetranitrate most lasting in its effects.

The effect of venesection upon blood-pressure as tested on five patients, seemed dependent largely upon the rapidity with which the blood was withdrawn, the effect at best being only slight and transitory.

Sweats, like other measures, were not lasting in their effects, though post-sternal oppression, or uremic dyspnea, and mild pulmonary edema respond more uniformly to sweats than to any other measure. Attention should be called to the fact that certain untoward effects may follow the use of sweats, in the way of subsequent increase in pressure, transitory hemiparesis, etc.

From these observations it may be concluded that the lowering of high pressure is attained with considerable difficulty and that the vasodilators are all transitory in their action, sometimes even being without effect. Venesection and especially sweats are of some value. But hypertension being only a compensatory process, the rational treatment is to attempt to remove the cause, for which purpose, in our present

state of knowledge, increased elimination through skin and bowels, together with mental and physical quiet, constitute the mainstay of our therapy.

In general it can be said that while erythrol tetranitrate will cause a more prolonged reduction in pressure than nitroglycerin or sodium nitrite, yet severe headache so frequently follows its use that its clinical value is much impaired. Daily sweats continued, are perhaps the most reliable means of keeping the pressure down.

PUBLIC INFORMATION UPON MEDICAL COMMERCIALISM.

Our attention has been directed to an article reproduced in a recent issue of the *Fort Wayne Journal-Gazette*, from a late number of the *Buffalo Medical Journal*, on the question of division of fees among doctors, written by Dr. Matthew D. Mann.

In prefacing the article, it is stated that Dr. Mann, believing in the right of the public to become acquainted with the prevalence of this nefarious practice, has adopted the newspaper medium as the *dernier ressort* for the suppression of the evil. For this reason it is said that the contents of the article are being given to various newspapers throughout the country for widespread publication. If this be true it would seem that the days of division of fees among doctors as a form of medical commercialism are numbered. And yet there will probably remain a certain number of conscienceless traffickers, with the parasitic feeders, who will skulk about for some other dark and devious path by which the pocket-book of their unfortunate patients can be pilfered of the niggardly percentage in a newer and more secretive fashion.

Just here one cannot refrain from expressing admiration for the all-too-rare honesty exhibited by a country practitioner who is said recently to have executed what should prove to be a lesson-teaching *coup d'état* upon an Indiana surgeon. The latter gentleman having permitted the referring physician to assist in the operation, and assuming the blood of this doctor to be as yellow as his own and that of many others whose business he was daily endeavoring to buy, was rudely awakened from his vision, when he learned that the blueblooded country doctor had, upon receipt of his proffered commission check, promptly endorsed it and turned it over to the husband of his patient, doubtless with an accompanying exposition of the true state of affairs. Unquestionably this surgeon is consoling himself that few and far between are the men who would thus

throw back in his face the insult he is constantly offering to honest men, but, thank Fortune, there are a few such, and here's hoping that they may procreate rapidly!

While deprecating the necessity for a public exhibition of seulduggery within the ranks of the so-called regular profession, yet we cannot but congratulate the editor of the *Fort Wayne Journal-Gazette* upon having had the moral stamina to initiate the campaign in its section. We attack the newspaper for giving space to open and broad-faced lies at the hands of quacks merely for the sake of the few dollars and cents derived therefrom, and we abhor those villains who make such bold and brazen claims; yet there lurk within our ranks men of supposedly high standing whose very business consists in the buying and selling of peoples' health and even lives! There can be no question that a very considerable number of operations are not only advised but even urged by the avaricious and grafting medical attendant who is looking only for his paltry commission instead of the real interests of his patient. This is certainly a sad commentary upon a profession whose very ethics primarily require that its members shall everlastingly fight for the suppression of morbidity and mortality—whether it be by prophylaxis, preventive medicine or actual therapy.

As for the commercializing surgeon, he should be proud, indeed, to have his name written down in history as a precept for young men to follow! Dr. Mann very appropriately remarks that any young man with the normal standard of morality will look askance at a profession whose earnings must come through such illicit measures. Any well-conducted business enterprise would turn away from such dishonest, and hence contemptible means of increasing its volume of business.

As a matter of fact there are no extenuating circumstances for the pursuit of this practice. In the first place, no surgeon whose prime regard is for the safety of his patient will permit of untrained and ever-changing assistance at his side, any more than he would tolerate an inexperienced and different anesthetizer for each operation. He will have his own assistants, in whom he has absolute faith and from whom he knows no danger can come; so that the excuse of "pay for assistance" is merely begging the question and should be but aqueous unction to the soul of him who seeks thus to reconcile his conscience to what he knows to be sheer dishonesty. Again, no medical man of a high degree of self-respect will permit his patient to be thus duped, nor will he suffer the integrity of his relations to his people to be infringed upon through such

base practices. He needs no surgeon to tell him what to charge for helping the little ones into the world any more than he needs the same help to collect his fee when he has later saved the life of such a little one by an early diagnosis of diphtheria and prompt administration of anti-toxin. Every man, in medicine as elsewhere, is the stronger for taking his own measure. And finally, if the practice were a perfectly legitimate one, why all the efforts at concealment? Why not lay the matter before the patient in a straightforward manner so that he will know just where and to whom and for what his money is going?

The faculty of the Indiana University School of Medicine is to be congratulated upon its recent stand in asking its members to go on record in this matter and in favoring the expulsion from its body of any member found guilty of this disgusting and demoralizing practice. It is a disgrace to the profession that it is finally forced to face a newspaper exploitation of what all must admit to be a not uncommon procedure within our ranks.

THE NATIONAL LEAGUE FOR MEDICAL FREEDOM.

Probably few people are aware that there is a bold and bloodthirsty plan on foot to seize the United States Government and turn it over, body and breeches, to a band of political and piratical doctors known as the American Medical Association. The diabolical scheme in all of its iniquitous hideousness has been discovered and published to the world presumably by a select body of saints and martyrs from the ranks of the Christian Scientists, Osteopaths, Anti-vivisectionists, proprietary medicine manufacturers, and a few other birds with ruffled plumage who are now making a ludicrous effort to fly together and make their squeaks and squawks blend harmoniously in one tune which has as its keynote the protection of the American people from the tyrannical bondage contemplated by the "Regular" medical profession.

The advertisements in the public press and the circulars sent out from headquarters in New York say that the new organization is known as the National League for Medical Freedom, and intimates that the object of the league is to prevent the hydra-headed monster, the American Medical Association, from confiscating everything in sight which is not chained down. Even our own pugnacious but genial and accomplished pamphleteer, Lydston, who is liberally quoted, is immortalized and given a halo, and trustingly placed in the company of such other halo-wearers

as Mother Eddy, Auntie Belais, Grandpa Still, and the discoverers of a host of proprietary remedies guaranteed to cure everything from consumption to the pip. The countless millions of people who are not in sympathy with the corrupt and death-dealing practices of the members of the American Medical Association are asked to join in the humanitarian movement to prevent the seizing of the Government for the purpose of making it subservient to the selfish purposes of a gang of free-booters who prate of their desires to promote the health and happiness of the American people.

The creation of a department of public health as one of the features of our Government is depicted by the League for Medical Freedom as nothing short of a measure of tyranny which would enslave the country and add millions of expenses to our already overtaxed inhabitants, who need the money to buy Mrs. Winslow's soothing syrup, copies of Mrs. Eddy's Science and Health and Key to the Scriptures, and Lydston's famous literary production, entitled "The Russianizing of the American Medical Association." The study of the causes and prevention of disease and of the effort to lower our morbidity and mortality rate is not thought worthy of the time and money required to carry it on, and is considered inimical to the best interests of the country, which thrives better on a diet of preventable disease and pestilence. Men like Flexner and Trudeau are looked upon as exploiters, and as for Wiley, Hurty and others of their stripe, they might as well drown themselves in a pot of mush, for they are looked upon as no better than common thugs.

And all this opposition arises because the American Medical Association has made some progress in bettering the conditions of the people, has exposed some of the frauds and practices of the proprietary medicine manufacturers and the medical fakers and pretenders, and has outlined and is working for the adoption of a national department of public health which would prove of inestimable value to the country in the conservation of health, to say nothing of an enormous saving of money.

But, to use a slang expression, "there is a nigger in the woodpile," in the form of the proprietary medicine association. There is an old saying that if you throw a brick into a pack of dogs you can always tell by the yelp when a dog has been hit. The American Medical Association, through its exposure of frauds, deception, trickery and dishonesty on the part of the proprietary medicine manufacturers and the medical quacks and pretenders has, figuratively speaking,

hit a dog and that dog has not only let out a yelp but is attempting to get even by setting his teeth into the one making the attack. In this effort assistance is secured from other malefactors who have heard the noise and are resting uneasily, or are proffering aid through sympathy for the supposedly injured party. The Christian scientists, the osteopaths, the anti-vivisectionists and all the other pseudo-medical cults in a grand hallelujah chorus are only tools of the proprietary medicine association, which seeks to draw attention from its iniquitous results and incidentally perpetuate its practices.

The lamentable feature of this mixup is that some erstwhile reformers in the American Medical Association have seen fit to ally themselves with the common enemy and make of themselves tools for the tearing down of all that honesty, common decency and a regard for humanity make membership in the medical profession worth having. In this propaganda foisted upon the public by the so-called League for Medical Freedom will be found barefaced lies and some of the most wilful misrepresentations. Little less could be expected from a group of malefactors who have always profited by deception and dishonesty, but the fact remains that there are those who through ignorance may be led to believe these falsehoods and calumny emanating from those who have personal and selfish aims to serve, and it is therefore the duty of every self-respecting member of the American Medical Association to exert his influence to bring out the truth and in behalf of all the association stands for in its work for the public good.

The establishment of a national department of public health is in the line of progress, and for the conservation of the health and happiness of the people. It is expected that it will have the opposition of some powerful interests that have been hurt through the warfare for the protection of the people, but no righteous cause was ever won without opposition, and the more active the opposition the greater the need of concentrated effort to win. Every right-thinking medical man should therefore give active assistance to the work of the American Medical Association.

SUMMER RESORT DANGERS TO HEALTH.

The Chicago Board of Health has recently issued a bulletin which calls attention to the dangers of the vacation trip if due care is not observed in obtaining pure water and food and hygienic surroundings. The bulletin says:

"It is now about June 1. Our people are beginning to plan their summer vacations. Some will be benefited by their outing, some will be harmed.

"A good many people who lead careful lives at home get reckless when they go away. They will drink any kind of water, will stand for dirty milk, will tolerate flies. It is vacation and 'anything goes.' A fair percentage of our typhoid is brought about in this way."

But the bulletin's warning contains a saving clause. The board of health has made some inquiries and on application will advise as to safe outing places, at least in Michigan, and hopes to be able to do the same relative to Wisconsin within a few days. The bulletin says:

"The Michigan state board of health has furnished us with a sanitary report on thirty-four resort towns. If you will write to the health department we will endeavor to advise with you as to the sanitary status of outing places in Michigan. We hope that we may obtain similar information for resorts in Wisconsin.

"The state board of health of Michigan is rendering a service not only to our people but also to the people of its own state. Resorts which properly protect their patrons should be encouraged. They have also a right to protection from the harm done Michigan as a summer resort state by those who, being slovenly, trade on the name and do harm to the cause."

The Indiana state board of health should follow the lead of the Michigan State Board of Health by investigating the resorts in Northern Indiana where thousands of people spend their summer vacations. Many of the resorts are breeders of typhoid and diarrheal diseases because of their impure water supply and unsanitary conditions. The average summer hotel proprietor has about as much regard for sanitation as a rabbit has for the Ten Commandments. An effort is made to conduct the resorts as cheaply as possible without incurring too much complaint from the resorters, and the question of the health of the people is of minor consideration when compared to the question of profit from the resort. Conditions which would be intolerable in cities and towns are looked upon as necessary evils at a summer resort, and in consequence the fall harvest of death and disease is the penalty paid for inattention to the recognized laws of health. Often these conditions prevail because of ignorance on the part of those who are responsible, and the conditions are tolerated by the vacation seeker because of ignorance or perhaps because of an overwhelming desire to get away from city or town at any cost.

The Indiana state board of health can do an invaluable service in the cause of public health by making a tour of inspection and investigation of some of the more frequented Indiana resorts, and publishing the results in the public press, as well as in bulletins for distribution to the people. If actual inspection is not feasible then warnings through the public press as to what to avoid during the summer outing may prove valuable suggestions to those who otherwise might not give the subject attention.

EDITORIAL NOTES

THE Editor of THE JOURNAL had the pleasure of being the guest of the Illinois State Medical Society at its annual session, held in Danville, May 17 and 18. On invitation he delivered an address on the subject, "What the President can do to Make the County Medical Society a Success."

Now for the safe and sane Fourth of July which the medical profession has been advocating, but in the meantime lay in a supply of anti-tetanic serum for the prevention of tetanus following infections caused by blank cartridge or gunshot wounds. It is not sufficient to administer the serum after the development of tetanic symptoms. It should be administered in suspicious injury cases as a prophylactic.

SEVERAL wellknown firms who are making reliable biologic products are offering antimeningitis serum to the medical profession. These products are carefully made and are reliable. The use of antimeningitis serum should be more common, and our readers are urged to investigate the subject thoroughly, with a view to adopting this very valuable means of treating a disease which is so generally fatal in its results.

WE DESIRE to remind the committees of the Association that it is time to prepare reports for the Fort Wayne session of the Association, for, according to the provisions of the By-Laws of the Association, the reports must be published in the issue of THE JOURNAL, which comes from press just before the annual session. This means that copy should be in our hands by August 25, and it is not too early for members of committees to begin work.

THE Hord Sanitarium, of Shelbyville, which recently, through its medical director, volun-

teered the information that an attempt was being made to run the institution on an ethical basis. has evidently altered its good intentions, for it now advertises in the most flagrant manner in the public press. There is an old saying that you can not get blood out of a turnip, and it is perhaps too much to expect the sponsors for the Hord Sanitarium to be ethical.

THE Illinois State Medical Society held its annual session at Danville May 17 and 18. The attendance was very large, and the scientific, social and political program was carried out with a good deal of enthusiasm and interest. The conference of county and district medical society officers was particularly well attended, and the reading and discussion of papers proved a valuable feature for those who are interested in organization work. The work of the conference could be profitably duplicated by other state associations whose life depends upon county societies, and the latter in turn depend upon the enterprise, activity and interests of its officers.

THE VERY late appearance of our May number seems to call for the following explanation: After the May number had gone to press at the usual time and about one-half of the issue had been printed, it was accidentally discovered that a serious typographical error appeared in one of the leading editorials, and the error, though consisting of but the addition of two letters, altered the meaning of the editorial to such an extent that it was deemed absolutely necessary to correct it. The presses were stopped, the pages containing the error destroyed, and new pages with error corrected substituted. This delayed the mailing, and our readers are asked to accept our apologies.

THE Committee on Arrangements for the annual session of the Indiana State Medical Association might profitably duplicate the plan of the Committee on Arrangements for this year's meeting of the Illinois State Medical Association by repeatedly notifying members of the association concerning the date of the session, the program to be offered, the social features arranged, the kind and character of hotel accommodations to be obtained, and the railroad and traction facilities for reaching the place where the session is to be held. The success of any session depends not only upon providing a good program and suitable entertainment, but in liberally advertising the session so that members of the association will have no excuse for forgetting the date

of the session and the opportunity will be afforded of absorbing a little of the enthusiasm of those who are responsible for the success of the session.

THE May number of THE JOURNAL contained a complete list of the members of the Indiana State Medical Association. It will be noticed that several counties are not represented and in one instance lack of representation is reported to us as due to the failure on the part of the secretary to send in dues that were collected last December. Of course the Association can not be held responsible for the neglect of county secretaries, and it remains for the county societies to use due judgment in the selection of secretaries who will be faithful to the trust imposed upon them. Failure to pay Association dues by February 1st means failure to keep up membership in the state organization, as well as membership in the American Medical Association. The matter is therefore of much importance and should not be looked upon lightly. It is bad enough for members to neglect to pay dues but it is unpardonable for a secretary to fail to turn over promptly dues that have been paid to him.

THE National League for Medical Freedom, which has been devoting considerable advertising space in the daily newspapers to an explanation of the aims and objects of the league, and incidentally publishing a list of the officers and directors, have quite recently discovered that a grave error was made in having as principal officers some of the leaders in the proprietary medicine business. Accordingly the board of directors has been reorganized and the names of the representatives of proprietary medicine interests have been omitted. This removes some of the publicity given to the association of the proprietary medicine interests with the movement opposing the American Medical Association and its efforts to secure a national department of health, but it does not alter the fact that the proprietary interests are essentially the leaders in the league, and probably put up the money to carry on its work.

THERE are several varieties of medical "spongers" but one of the worst is the fellow who obtains his medical reading by borrowing medical books and journals from his confrères and then purposely or otherwise forgetting to return them. The same sort of fellow tries to save a little money and at the same time get up-to-date medical literature by frequently writing various medical journals for sample copies. The request

is made without the slightest intention of becoming a subscriber, but with the intent of getting something without paying for it. We know several "spongers" of this type, some of whom seem to operate on a system, as their requests for sample copies come in at regular intervals and always on a postal card as an economy in postage. We are pleased to say that only one of these regular sponging correspondents resides in Indiana, and the most persistent sample copy fiend lives in Arkansas, and his requests have been coming regularly to the writer for the past twelve or fourteen years. For the benefit of some of our editorial friends who may wish to be rid of the sample copy fiends we will say that one of these days we will prepare a list of names of men who are particularly guilty of this practice, and distribute it for the self-protection of editors who are frequently imposed upon by the sample sponger.

WE ARE still hearing complaints concerning failure to receive *THE JOURNAL* and upon investigating such complaints we almost invariably discover that the trouble arises through non-payment of association dues, which include a subscription to *THE JOURNAL*. Sometimes the fault lies with the county society secretary, who has failed to send in the dues, but more often the one making complaint has neglected to pay dues. Sometimes the one who fails to pay dues until several months after such dues are payable thinks he is privileged to begin kicking immediately following his reinstatement to membership in the association, and before his remittance has had time to be properly credited he writes in an indignant manner to enquire why he is not receiving *THE JOURNAL*. All of which leads us to say that the man who is careless and indifferent to the requirements of his medical society is the last one who is warranted in being exacting in what is due him.

As we have repeatedly said, the secretary of the state association reports all paid memberships on the first of every month, and the names sent in are immediately placed on the mailing list of *THE JOURNAL*, with addresses as supplied. These names remain on the mailing list until February 1st of the following year, when, if the dues, including subscription for the current year, have not been paid the names are removed from the mailing list as also from membership rolls of the association. There is no reason why *THE JOURNAL* should not be received regularly by all members of the association in good standing unless, as occasionally happens, copies are miscar-

ried in the mails. Errors of that kind will be promptly corrected by supplying duplicate numbers if our attention is called to the matter.

DEATHS

DR. DAVID N. E. BROWN, from 1855 to 1895 a practitioner of medicine; died at his home in Butler, Ind., March 31, from arteriosclerosis, aged 78.

DR. ARTHUR WADSWORTH, Kentucky School of Medicine, Louisville, 1893; died at his home in Castleton, Ind., May 14, from heart disease, aged 52.

DR. JACOB P. MCINTOSH, Eclectic Medical Institute, Cincinnati, 1869; died at his home in Worthington, Ind., April 30, from senile debility, aged 74.

DR. FREDERICK CASTLE, a graduate of the University of Michigan, Ann Arbor, 1869, died at his home in Lowell, Ind., April 19, from cerebral hemorrhage, aged 69.

DR. JOSEPH C. KIMSEY, a practitioner of Steuben County for 54 years; a veteran of the Civil War; died at the home of his daughter, in Angola, May 16, aged 90.

DR. WILLIAM H. DUNN, of Gaston, a member of the Delaware County Medical Society, died suddenly at Indianapolis, of angina pectoris, May 30. He was born in Dearborn County, Indiana, April 29, 1847. He graduated at the Ohio Medical College in 1874; and located in Gaston in 1893, where he continued in practice until his death. Dr. Dunn was a member of the M. E. Church, a Mason, and also a member of the Odd Fellows. He was a good citizen, loved by all, and will be missed in his community.

NEWS, NOTES AND COMMENTS

THE office of Dr. L. B. W. Johnson, Ireland, was destroyed by fire, May 11.

DR. C. B. McCULLOUGH, of Indianapolis, has been elected president of the University Club of that city.

DR. HARRY H. LONG, La Porte, sustained minor injuries by the overturning of his automobile, April 29.

DR. B. F. KUHN, Elkhart, was seriously injured in a collision between his automobile and a street car, May 8.

DR. G. B. M. BOWER, of Vernal, Utah, formerly of Fort Wayne, has recently been seriously injured in a runaway.

DR. C. P. HUTCHINS has been appointed director of physical training at the University of Indiana, Bloomington.

DR. THEODORE WAGNER, of Indianapolis, headed the list of candidates on the Republican legislative ticket, at Indianapolis, recently.

DR. WILLIAM S. TOMLIN, of Indianapolis, has discontinued general practice, and has limited his practice to diseases of the nose, throat and ear.

DRS. W. N. WISHARD and E. D. Clark, of Indianapolis, attended the recent meeting of the American Surgical Association, at Washington, D. C.

DR. JOHN J. KYLE, of Indianapolis, is preparing the stereoscopic pictures on the surgery of the ear for Dr. Howard Kelly's stereoscopic atlas of operations.

DR. REBECCA ROGERS GEORGE, of Indianapolis, has recently delivered a course of lectures before the women of the Indiana State University at Bloomington.

DR. CARLETON B. McCULLOUGH, of Indianapolis, has removed his office from the corner of Michigan and Meridian Streets to 316 Board of Trade Building.

DR. LESLIE MAXWELL, a retiring intern of the Methodist Episcopal Hospital, will sail for Europe in June, to take post-graduate work in Berlin and Vienna.

DR. EDWIN KNOX was nominated for coroner on the Republican ticket, and Dr. Charles O. Durham received the nomination for coroner on the Democratic ticket in Marion County.

DR. FRED W. HICKSON, intern at the City Hospital, Indianapolis, after a competitive examination, has been appointed first lieutenant of the medical corps of the Indiana National guard.

ONE of our friends reports a new story on the optician. A man consulted a physician concerning the treatment of his eyes. When asked where he obtained his glasses he replied "from the Obstacle."

DR. CHAS. H. McCULLY, councilor for the Eleventh District of the Indiana State Medical Association, has resigned, and Dr. M. H. Krebs, of Huntington, has been appointed to fill the vacancy until the next annual session of the Association.

DR. LAFAYETTE PAGE, of Indianapolis, was elected vice-president of the American Laryngological, Rhinological and Otological Society, at its recent meeting in Washington, D. C. Dr. John J. Kyle also attended the meeting.

Since May 1 the Council on Pharmacy and Chemistry of the American Medical Association have accepted the following articles for new and non-official remedies:

Chinosol (Chinosol Co., Parmele Pharmacol Co.).

Diaspirin (Farbenfabriken of Elberfeld Co.).

Nucelin Solution, Abbott (Abbott Alkaloidal Co.).

Nucelin Tablets, Abbott (Abbott Alkaloidal Co.).

DR. GROVER C. PRITCHETT, a graduate of the Indiana School of Medicine, whose home is at Scotland, Ind., has been appointed the third intern on the medical staff at the St. Anthony Hospital, Terre Haute. The other interns are Drs. Homer B. Shoup, of Markle, Ind., and Ira E. Bowman, Washington, Ind., also graduates of the Indiana University School of Medicine.

THE annual graduating exercises of the Protestant Deaconess Hospital, Indianapolis, were held in the new nurses's home adjoining the hospital. The graduating address before the class of twelve was made by Dr. Hugo O. Pantzer; the diplomas were given by Rev. Henry W. Vitz, president of the board of directors and the class pin was presented by Miss Selma Segerlund, superintendent of the Training School.

Since the publication of the May number the following physicians have been reinstated as members of the Indiana State Medical Association:

INDIANAPOLIS

Dr. J. M. Smith
Dr. E. W. Burris
Dr. C. S. Goar
Dr. H. G. Gaylord
Dr. C. I. Fletcher
Dr. W. C. Engle
Dr. A. E. Sterne
Dr. M. J. Spencer
Dr. C. L. Marlatt
Dr. J. L. Masters
Dr. A. C. Peabworth
Dr. H. H. Wheeler
Dr. Hannah Graham
Dr. Thos. L. Taylor
Dr. Helen Knabe
Dr. Jas. A. Jackson
Dr. Fletcher Hodges
Dr. Marie Haslep
Dr. Caroline Reed
Dr. R. S. Chappell
Dr. T. A. Wagner
Dr. Orvall Smiley
Dr. E. E. Padgett
Dr. P. F. Martin
Dr. F. A. Morrison
Dr. F. N. Shipp
Dr. Paul Coble
Dr. T. E. Courtney
Dr. D. F. Berry
Dr. Amelia R. Keller
Dr. Moses Thorner
Dr. G. S. Row
Dr. H. K. Langdon
Dr. N. E. Jobes
Dr. J. D. Garrett
Dr. W. P. Garshwiler
Dr. F. M. Fitch
Dr. L. A. Ensminger
Dr. C. S. Woods
Dr. T. B. Noble
Dr. F. C. Warfel
Dr. E. C. Thomas
Dr. C. L. Ritter

LAWRENCE

Dr. Luther H. Ratliff

JULIETTA

Dr. J. H. Payne

NEW AUGUSTA

Dr. W. B. McDonald

WHITELY COUNTY**COLUMBIA CITY**

Dr. F. G. Grisier
Dr. D. S. Linvill

GIBSON COUNTY**HAZELTON**

Dr. H. M. Arthur

ALLEN COUNTY**FORT WAYNE**

Dr. W. O. Gross

BENTON COUNTY**AMBIA**

Dr. W. H. Taylor

MARSHALL COUNTY**ARGOS**

Dr. Henry McCracken

VANDERBURGH COUNTY**EVANSVILLE**

Dr. W. S. Pollard
Dr. M. Ravdin
Dr. W. H. Field
Dr. A. J. Knapp
Dr. Tony L. Bryan

HANCOCK COUNTY**GREENFIELD**

Dr. C. K. Bruner

WARRICK COUNTY**BOONVILLE**

Dr. S. L. Tyner

ELBERFIELD

Dr. G. H. Kiester

SULLIVAN COUNTY**CARLSLE**

Dr. G. W. Pirtle

GREENE COUNTY**WORTHINGTON**

Dr. J. B. Young
Dr. Geo B. Gray

SULLIVAN COUNTY**HYMERA**

Dr. C. W. Asbury

ELKHART COUNTY**GOSHEN**

Dr. G. A. Whippy

MADISON COUNTY**ANDERSON**

Dr. G. A. Whitledge

MONTGOMERY COUNTY**LADOGA**

Dr. S. R. Peacock

ORAWFORDSVILLE

Dr. K. T. Brown

ALAMO

Dr. A. F. Brown

HOWARD COUNTY**WEST MIDDLETON**

Dr. Fred N. Murray

BERNE

Dr. Amos Reusser

ADAMS COUNTY**GENEVA**

Dr. L. L. Mattox

LAKE COUNTY**WHITING**

Dr. E. M. Wells

HAMMOND

Dr. E. Mertz

GARY

Dr. G. H. Hosmer

MARSHALL COUNTY**LAPAZ**

Dr. H. N. Tallman

POSEY COUNTY**CABORNS**

Dr. W. Powell

PORTER COUNTY**WHEELER**

Dr. A. O. Dobbins

VIGO COUNTY**RENSSELAER**

Dr. F. H. Hemphill

TERRE HAUTE

Dr. H. C. Smith

BOONE COUNTY**ROSTON**

Dr. S. M. Comptons

ALLEN COUNTY**LEO**

Dr. E. D. Smith

FORT WAYNE

Dr. J. H. Gilpin

LAKE COUNTY**INDIANA HARBOR**

Dr. C. C. Robinson
Dr. W. L. Hughes

ST. JOSEPH COUNTY**SOUTH BEND**

Dr. Leroy Lewis

TIPPECANOE COUNTY**WEST LAFAYETTE**

Dr. C. Vinton
Davisson

LAFAYETTE

Dr. Urban A. Lyle

STEUBEN COUNTY**ANGOLA**

Dr. H. D. Wood
Dr. T. F. Wood
Dr. W. W. Wood
Dr. W. H. Waller
Dr. P. N. Sutherland
Dr. M. T. Ritter
Dr. W. H. Lane
Dr. F. B. Humphry
Dr. Thos. J. Creel

FLINT

Dr. H. A. Nichols

PLEASANT LAKE

Dr. G. N. Lake

HUDSON

Dr. A. J. Kimmel

FREMONT

Dr. R. L. Wade
Dr. J. L. Dunkle

HAMILTON

Dr. O. G. McFarland
Dr. J. F. Cameron

MISCELLANEOUS**ADRIAN TEXAS**

Dr. C. E. Hawn

SOUTH PASADENA CAL

Dr. T. L. Thompson

SOCIETY PROCEEDINGS

EIGHTH DISTRICT MEDICAL SOCIETY.

The fifth annual and the eighth meeting of the Eighth District Medical Society convened at Muncie on April 21, 1910. The Committee on Arrangements, consisting of Drs. Poland, Bowles and Wm. Kemper, had secured the auditorium of the First Presbyterian Church, and the ladies of the church served an ample repast after the morning session.

The morning session was devoted to a symposium on "The Business of Medicine," following the plan outlined early in the history of the society, to devote to the doctor himself, and medical economics, as much time as had heretofore been given to purely professional subjects.

Dr. Clay A. Ball of Muncie presented the first paper on "Our Profits and Our Losses," taking up the various economic factors entering into the present day demands of the practitioner, and deploring the commercialistic methods that are undermining the foundation of our professional welfare.

Dr. J. B. Garber of Dunkirk gave a description of the local methods practiced by the Dunkirk physicians for eliminating the dead beat from their books, and further deplored the lack of unanimity and concerted action of the individual members of the medical profession. The factor of the individual being self-centered and independent at one time was possible, but nowadays the individual must needs sink his identity in the interest of the many.

Dr. Grant S. Markle of Winchester discussed the relation of the physician to the pocketbook of the other fellow. The question of a fee bill has been incongruous, and the individual patient and the ability, experience and results of the work of the physician should all be taken into consideration in making up a charge.

Dr. Maynard A. Austin of Anderson presented a paper on "The Socialistic Future of Medicine," which is one of the unpleasant probabilities of the future. Dr. Austin's paper dealt with the situation as it exists in America and Europe, and not from a speculative standpoint. The facts given in his paper were gathered for the most part from the foreign letters and communications published in the *Journal of the American Medical Association*. Dr. Austin pointed out the dangers attending club and lodge practice and saw but one method of saving the profession from becoming a menial trade. This can be accomplished by making the individual members improve themselves so that the work of the extra good man will be appreciated as he is not at this time by the laity, and cause his services to be worth such a price that club work would offer no attraction, while the club members would as individuals hesitate to accept the services of such men as would accept lodge positions. At present when a man can get the same service from an individual for \$2 a year as he might have to pay \$2 a visit for, it is wisdom to accept the yearly proposition.

Following the dinner the business session was held, at which it was decided that the next meeting should be held at Portland, Ind., in April, 1911. Dr. W. D. Schwartz of Portland was elected president and Dr. Fred McK. Ruby of Union City, secretary-treasurer. Dr. Andrews of Muncie was appointed censor to fill the annual vacancy.

Several resolutions were presented to the society and their adoption recommended. One favored the passage of Senator Owen's bill, now before Congress; another asked the Governor to continue Dr. Spurgeon on the State Board of Medical Registration and Examination, as a return for his efficient work in the past; and another favored state legislation concerning the prevention of ophthalmia neonatorum, as outlined by the Tippecanoe County Medical Society.

The Advisory Committee for the ensuing year will consist of the Councilor for the district, Dr. W. H. Kemper, and Drs. U. G. Poland, W. W. Clapper, Chas. L. Botkin, M. A. Austin, and J. B. Garber.

Adjourned.

M. A. AUSTIN, Secretary.

NINTH DISTRICT MEDICAL SOCIETY

The Ninth Councilor District Medical Society met at Tipton, May 20. The House of Delegates convened at 11 a. m. at which the following officers were elected: President, Dr. A. S. Dickey, Tipton; first vice-president, Dr. Edgar Cox, Kokomo; second vice-president, Dr. W. J. Fernald, Frankfort; secretary-treasurer, Dr. Paul J. Barcus, Crawfordsville; assistant secretary, Dr. Geo. T. Williams, Crawfordsville.

A resolution was passed approving the action of Senator Robert L. Owen of Oklahoma in introducing a bill providing for a Department of Public Health, with a Cabinet officer at its head.

Dr. W. H. Williams of Lebanon read a paper on "Chronic Appendicitis in Women," which was discussed by Drs. Chittick, T. C. Kennedy, Moffitt, J. R. Eastman, and Cox.

Dr. Geo. F. Keiper of Lafayette read a paper on "Preventable Blindness." The paper was very elaborately illustrated.

Dr. J. P. Simonds of the State Laboratory of Pathology read a paper on "The Proper Relation Between Laboratory and Clinical Findings in Diagnosis."

Dr. J. R. Hicks of Covington read a paper on "Quarantine" that elicited a very lively discussion, Dr. Hurty of the State Board of Health taking a leading part.

Dr. A. C. Kimberlin of Indianapolis presented a clinical case and spoke very interestingly on the diagnosis of tumors in the region of the liver and stomach.

A banquet was served at 6 p. m., with Dr. M. V. B. Newcomer of Tipton as toastmaster.

Drs. Brayton, Overman, Keiper, J. R. Eastman, and Compton responded to toasts.

About one hundred were in attendance. The next annual meeting will be held at Kokomo.

TWELFTH DISTRICT MEDICAL SOCIETY

The society met in regular session May 17, 1910, in the Assembly Room of the Court House, Fort Wayne, Ind. Meeting called to order by President Van Buskirk. Election of officers resulted as follows: President, Fred Metts, Ossian; vice president, W. W. Swarts, Auburn; second vice president, Wallace Hays, Albion, and secretary-treasurer, G. Van Sweringen, Fort Wayne.

The morning session was taken up with clinics at Hope Hospital by Drs. Bulson, Porter and Drayer. Many interesting cases were presented and the clinics were well attended. (Report of this clinic will appear in full in a later issue of THE JOURNAL.)

The afternoon session began at 1 o'clock. Owing to the absence of several of the essayists it was impossible to carry out the complete afternoon program. Dr. Ravenel of Madison, Wis., who was to give the evening lecture, kindly consented to address the society on the subject of tuberculosis. His talk was most interesting and was enjoyed by every one present. Dr. C. G. Beall read a paper on "Cyclic Vomiting" (which will be published in full in a later issue of THE JOURNAL).

Dr. Weaver, Fort Wayne, said that Dr. Beall has been fortunate in having a number of urinalyses to record in cases of cyclic vomiting. The consensus of opinion is not as yet in favor of its being an acetouria. Rotch relates cases which do not show acetone, and believes that many cases are not due to this cause. Lusk calls attention to the fact that in extreme hunger, acetone will be found, and refers to experiments on Succi and other professional fasters. Cyclic vomiting cases may develop acetonuria as an incident in the course of the disease. Coutts thinks cyclic vomiting a neurosis and that it is similar to migraine in origin. The essayist mentioned that Kerley thinks it due to a rheumatic taint and that he has reported thirty cases in which sodium salicylate has been of benefit. Holt says that a neurosis of some sort can be found in the child or the family in all cases.

Dr. Carver, Albion, asked the essayist if he expected to get a result from the small doses of bismuth, or whether it was given as a placebo.

Dr. Metts, Ossian, asked why some cases of this kind sometimes come in epidemics.

In closing Dr. Beall said he knew there were cases reported which do not show this acetonuria. The

ammonia is the guide to acid intoxication. The fact that this crude test does not show it, is not a sign that it is absent. He knows of no reason why these cases should occur in epidemic form any more than there should be three or four cases of ovarian cyst with twisted pedicle, occur within a short space of time. Kerley gets benefit by giving an alkali at the same time he gives the salicylates.

Dr. C. E. Barnett presented a paper entitled "Bacterins as an Adjuvant in Urogenital Surgery." Dr. Barnett said that the seminal vesicles are so inaccessible, from an operative standpoint, that the majority of men would rather run the risk of the disease than the hazard of an operation, and the author personally believes that there is considerable logic shown in their judgment. The essayist advocated the treatment of chronic infection by the gonococcus, with bacterins, and said that he believed the autogenous vaccines were better than the stock vaccines or the Neisser coccus serum. The essayist reports three cases treated by the vaccine method, one of which was cured, and the others greatly benefited. Autogenous vaccine has been useful in the following cases in his hands: (a) Chronic posterior urethritis and vesiculitis; (b) postoperative acute salpingitis; (c) postoperative chronic salpingitis; (d) extirpation of bilateral Bartholin abscesses; (e) a case of left kidney and bladder infection. The vaccines were made as follows: The pus was massaged from the vesicles and prostate, or wherever found, and either emulsified directly into bacterins, or else in its entirety is spread upon blood serum and incubated, the dependence being placed almost entirely upon its multiplication within the pus itself. Bacterins are made from this in strengths of fifty million, one hundred million and upwards to five hundred million. The patient, beside all other treatment, can be injected daily with gradually increased doses unless a reaction occurs.

In the discussion, Dr. B. W. Rhamy of Fort Wayne said the well known difficulties of growing the coccus of Neisser render this treatment almost beyond the reach of the general practitioner. The stock vaccines are not reliable. The treatment of disease by bacterins stands to-day as substantial as any branch of therapeutics, and their proper application can do much good. Bacterins stimulate the production of opsonins and help to defend the body against infection. In connection with Dr. Barnett, found method which was successful in growing the gonococcus. Blood serum was used. Thick pus was spread over the surface and the vaccine was then made from the growth which developed. It was found that the vaccine made from culture was not as powerful as that made direct from the pus, so the latter method was employed. In the vaccine made direct from the pus, we have also the added power of serums, opsonins and antitoxins. Has found the response to this form of vaccine greater than that of the stock vaccine.

Dr. Metts of Ossian said that he used stock vaccine a number of years ago and did not get any result with it. This result may be due to faulty technic or dosage. Has used the serum in a number of cases of gonorrheal "rheumatism" with good result. One case developed an erythema which cleared up quickly. Was sorry the essayist did not say something on the colon bacillus infections, because it has been his experience that the colon bacterins act almost as a specific in these cases.

Dr. Barnett, in closing, said that he has reported these cases to the American Urological Society and believes we will have the results of a number of observers in the course of a year. Believes that any kind of treatment of these infections will do little good unless drainage of the infected part is good.

President Kennedy talked for a few minutes on medical society organization, and gave it as his opinion that we are going to have the best meeting in Fort Wayne this fall that the State Society has ever held.

The evening session was given over to an open meeting to the public, the address being given by Dr. Ravenel of the Wisconsin University on the subject of "Transmission of Bovine Tuberculosis to the Human Being." The speaker dealt in a general but convincing way with the questions he had dwelt upon more scientifically before the society in the afternoon. While Dr. Ravenel recognizes the fact that infection of the human adult by the bovine tubercle bacillus is rare, yet in children it is not at all uncommon especially in large cities such as New York, where it has been shown that in 1 child in every 20 tuberculous children the infection can be attributed to the milk. The same and logical declaration made by the speaker was that even if but one child in ten thousand derived its infection this way we would be derelict did we not adopt measures of prevention, which measures Koch and his followers strongly assert are unnecessary. It was thoroughly emphasized that the only effectual way to safeguard the health of the public is to test thoroughly by the injection of tuberculin every cow whose milk supply goes for human consumption.

Adjourned.

GARRETT VAN SWERINGEN, Secy.-elect.

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of April 19, 1910.)

Society met in regular session in assembly room, and meeting called to order by the president, Dr. Charles E. Barnett, with 28 members and a large number of visitors present, this being a public meeting.

Dr. Frank P. Norbury, president of the Mississippi Valley Medical Association, of Kankakee State Hospital, read an address on "Medical Quackery." He said that education is the solution of the question of medical quackery. Curative medicine is in the hands of the medical profession. Preventive medicine is in the hands of the public. Medical quackery is a problem of sociology, and through sociology it must be reached.

Dr. Porter made motion, which was seconded and carried, that the society extend to Dr. Norbury a vote of thanks.

Adjourned.

J. C. WALLACE, Secretary.

(Meeting of April 26, 1910.)

Society met in regular session in the Assembly Room, with eighteen members present.

Dr. Albert E. Bulson, Jr., gave a talk on "Some of the Commoner Fundus Lesions," and illustrated the same with colored plates shown upon the screen with the opaque projector. He emphasized in particular the fundus lesions found in connection with syphilis, diabetes, and the various forms of nephritis.

Adjourned.

J. C. WALLACE, Secretary.

(Meeting of May 3, 1910.)

Society met in regular session Tuesday evening, with twenty-one members present. Minutes of previous meeting read and approved.

Dr. M. F. Porter presented a paper on "Status Lymphaticus." He reported a case at Hope Hospital last year which showed that a study of the blood was of great importance. Causes of death are mechanical and toxic. The author is of the opinion that an ante-mortem diagnosis can be made; and also that the condition is quite common if we look close enough for it. All patients with enlarged tonsils should be suspected. An enlarged thymus or a thymus present when it should be absent is of importance in diagnosis. A knowledge of the blood picture is of importance. These individuals are usually of pasty complexion with a weak pulse of low tension.

In the discussion Dr. K. K. Wheelock reported a case operated for adenoids which died. He said that very frequently the introduction and spreading of the mouth gag brings on marked symptoms of syncope. A very trivial shock may be sufficient to produce serious disturbance in circulatory or respiratory systems in these cases.

Dr. B. W. Rhamy spoke on the blood changes, and gave conclusions and opinions of authorities from a short résumé of literature. Dr. Rhamy is of the opinion that the condition that causes death causes the increase in the lymphocytes.

Dr. C. G. Beall said that from gross anatomical finding it is absolutely impossible to make a diagnosis between status lymphaticus, lymphatic leukemia and pseudoleukemia. He believes the blood findings of extreme importance.

Dr. B. P. Weaver spoke on the pathology of status lymphaticus and said it is a definite symptom complex. There is a hyperplasia of the thymus and in children hyperplasia of all lymphatic tissue. The lymphotoxemia is as important as the lymphatic hyperplasia. The enlargement of the thymus *per se* is not the most important factor, but the lymphatic exhaustion is of equal importance.

Also discussed by Drs. McOscar, Van Buskirk, Greenawalt and Dancer. Closed by Dr. Porter.

Dr. S. D. Sledd read a paper on the "Differential Diagnosis of Cholelithiasis and Ulcer of the Stomach." Reported a case of ulcer of the stomach which had been diagnosed as gall-stones, but on post-mortem ulcer of stomach was found. Asked for discussion of bedside differential diagnosis.

Opening the discussion, Dr. McOscar said exploratory operation is a proper surgical procedure to arrive at a diagnosis. Advocated early operation for gall-stones.

Dr. Porter said the high percentage of carcinoma due to gall-stones is growing less and less. So-called dyspeptic symptoms are very common in gall-stones. He said if the physician has made a diagnosis of ulcer of the stomach, cholecystitis or gall-stones he has done considerable, as they are all surgical diseases. Closed by Dr. Sledd.

The Board of Censors reported favorably on applications of Drs. E. D. Smith and Noah Zehr, and on motion secretary cast ballot of society for above doctors.

Dr. Porter read the following resolution as presented by Dr. McCaskey, and on motion same was adopted:

WHEREAS: There is now pending in Congress a bill (S. 6049) establishing a department of public health and for other purposes; and

WHEREAS: The establishment will result in the saving of many human lives and much sickness, the loss of much money through diseases of animal life, and effect great economy in the administration of various bureaus now engaged in health work; therefore, be it

Resolved; That we request the president and secretary of this society to write the member of congress from this district and the senators from this state urging them to use their every endeavor to secure the passage of this bill; and be it further

Resolved; That we request the president and secretary of this society to enlist the good offices of our daily papers, of the Commercial Club, of the Women's Club League, of the Ministerial Association, and of the Bar Association in behalf of this bill.

Adjourned.

J. C. WALLACE, Secretary.

HAMILTON COUNTY.

The Hamilton County Medical Society met in regular session in Noblesville, May 10. Dr. H. R. Thurston of Indianapolis was present and read a very interesting paper on "Serum Therapy," which was followed by a general discussion by the society.

Adjourned.

THOS. O. REDDEN, Secretary.

HUNTINGTON COUNTY.

The Huntington County Medical Society met in regular session May 10. The society endorsed the propaganda of the Tippecanoe County Medical Society to eradicate ophthalmia neonatorum.

Dr. J. B. Hopkins, a retired army surgeon, was elected an honorary member of the society. Drs. Olive O. Nelson and J. M. Hicks were voted resolutions of sympathy, and well wishes for rapid recovery.

Dr. Wallace S. Grayston read an excellent paper on "Extrauterine Pregnancy," giving the histories of three cases diagnosed and successfully operated on within the last year. Dr. A. H. Northrup of Markle opened the discussion.

Adjourned.

R. Q. TAVINER, Secretary.

NOBLE COUNTY.

The regular meeting of the Noble County Medical Society was held at Albion, May 10, 1910. The election of officers resulted as follows: President, W. H. Hays, Albion; vice-president, F. R. Clapp, Ligonier; secretary-treasurer, G. B. Lake, Wolcottville; censors, J. L. Gilbert, Kendallville, W. H. Franks, Ligonier, and J. E. Luckey, Wolf Lake. "Prostatectomy, Its Indications and Results," was discussed by Dr. J. L. Gilbert of Kendallville, in which he described the dangers of residual urine, and the horrors of catheter life. The results of the operation are fair as to life, but such serious results as impotence and dribbling frequently follow. In closing he said that this operation ought not to be undertaken except by those who have made the subject a life study.

Dr. W. H. Hays of Albion spoke on the subject. "Prostatic Hypertrophy from a Medical Standpoint." He emphasized the importance of discovering the pres-

ence of residual urine as early as possible, so as to avoid toxemia from that cause. He spoke of the value of urotropin in some of these cases and emphasized the importance of carefully instructing these patients in the care of themselves.

Dr. W. F. Carver reported twelve monsters in his obstetrical practice, and mentioned particularly three cases of acrania which he had seen. All three were suspected of being multiple pregnancies, all presented hydramnios and all were girls. In their other particulars they were very dissimilar, so that no valid conclusions could be drawn.

The following resolutions were unanimously adopted:

WHEREAS: The health and vital efficiency of the people of any country are the most valuable asset which the country can possess, and

WHEREAS: We believe that the life and health of the people can best be conserved by concentrating and enlarging the scope of the Government's activities along these lines and by placing the directions in the hands of an expert in public health affairs, and

WHEREAS: We believe that this can best be accomplished by consolidating the existing bureaus into a national department of public health, with a secretary of public health, who is a member of the cabinet, at its head, therefore he it

Resolved: That the members of the Noble County (Indiana) Medical Society, individually and collectively, are in hearty sympathy with the plans and purposes of the Owen Bill (S. 6049) and earnestly urge our representatives in Congress to give their careful attention and support to this bill, and to all legislative measures which tend in the same direction; and further,

WHEREAS: We believe that no persons are so adequate to minister to the needs of the sick and apply the proper remedies as are the regularly qualified and licensed physicians of this country, and

WHEREAS: We believe that any course of action which would limit their freedom in the choice and application of such remedies as may appear needful in a given case, is subversive of the best interests of the people of this country, he it

Resolved: That while we, the Noble County Medical Society, are in full sympathy with the avowed purpose of the Cullom Bill, to limit and control the sale and use of habit-forming drugs, we feel that an injustice is done to the medical profession, and through them to the people at large by the provisions of Section IV of said Cullom Bill, and we earnestly urge upon our representatives in Congress that they endeavor to secure the amendment of said Section IV so as to read, "But that nothing contained in this section shall apply to licensed practitioners actively engaged in medical practice, to public hospitals, or to scientific or public institutions."

Drs. Hooke of Brimfield, Long of Kimmel, and the Vandevetters (husband and wife) of Ligonier, were elected to membership in the society.

The twenty-five members present were the guests of Drs. Scott and Luckey.

Adjourned.

GEO. B. LAKE, Secretary.

BOOK REVIEWS

SEXUAL LIFE OF WOMAN IN ITS PHYSIOLOGICAL, PATHOLOGICAL AND HYGIENIC ASPECTS. By E. Heinrich Kisch, M.D. Translated into the English language by M. Eden Paul, M.D. Rebman Company, New York, 1910. Cloth, \$5.00.

This volume dealing with the sexual life of woman, treats of its various phases in relation to the physical and mental development of the individual, both in the

state of health and disease. The several sexual epochs are differentiated and the changes peculiar to each are considered in detail.

The author gives not only his conclusions, the outgrowth of extensive experience and observation, but also quotes freely the theories and deductions of those who likewise have done extensive research along this line. The book will be of interest to both physicians and biologists. It treats of subjects not to be found in volumes on gynecology and obstetrics. The translation into English is very clear and readable.

A TEXT-BOOK OF OBSTETRICS: Including Related Gynecologic Operations. By Barton Cooke Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania. Sixth revised edition. Octavo of 992 pages, with 847 illustrations, 43 of them in colors. W. B. Saunders Company, Philadelphia and London, 1909. Cloth, \$5.00 net; half morocco, \$6.50 net.

The thorough revision of this standard text-book on obstetrics is well illustrated by the new material added, of which there are seventy-seven pages and eighty illustrations, three of the latter in color.

For the most part the addition has been in the chapter on operations which has been extended to include the operations consequent upon the child-bearing process at all periods. As the author justly states in his preface, many of these gynecologic operations belong to obstetrics just as truly as does the application of forceps; for instance, pan-hysterectomy for chorio-epithelioma, the operative correction of retrodisplacement following childbirth, or salpingo-oophorectomy for ectopic pregnancy, etc. Indeed much more attention has been paid to all questions of gynecology than in previous editions because the author believes that the specialist in obstetrics should also be an expert in every department of gynecology. In fact, Dr. Hirst maintains that even the general practitioner should be prepared to give proper advice on all complications of child-bearing and its relation to gynecology.

A commendable feature by way of a section on the causes and treatment of sterility has been added. The author certainly makes a conservative estimate when he says that in at least 20 per cent. of sterile marriages the fault lies with the male. It would seem that the wide prevalence of gonorrhea in the male would account for a much greater percentage of sterility and particularly of one-child sterility, of which latter this source of infection is probably the most prolific cause.

The chapters on the pathology of the puerperium have been slightly condensed, though not materially altered in substance.

As has been said, the greatest change in this revision is the addition of much matter and many details concerning the various obstetric and gynecologic operations, in conformity to the previously-expressed views of the author upon the close relationship of the two branches.

The literature throughout the volume has, of course, been brought up to date.

The work remains, as formerly, one of the standard obstetric texts and its thorough revision should make it more popular than ever.

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ORIGINAL ARTICLES

THE DIAGNOSIS AND TREATMENT OF CEREBROSPINAL MENINGITIS.*

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Cerebrospinal meningitis, while not a common disease, occasionally is epidemic, and sporadic cases not infrequently occur. Its high mortality, serious sequelæ and some recent innovations in treatment justify its consideration.

The disease first appeared, or at least was first recognized in America, about one hundred years ago. It had previously been recognized and described in Geneva in 1805. Epidemics have occurred throughout the United States at irregular intervals. The last severe one was in New York City, from 1904 to 1908. There were about four thousand persons affected, with approximately three thousand deaths.

LOCAL EPIDEMICS.

The disease has not been widely epidemic in Indiana since the Civil War. At that period it was quite prevalent, few counties escaping its visitation. Pathetic evidences of its ravages still exist in many communities, in the form of physical or mental defectives who were children at that time.

ETIOLOGY.

The contagious character of the disease has long been recognized but the method of transmission was for a long time unknown. It spreads from the patient to the attendants, but is probably not transmitted through a third person, or

by fomites. Like pneumonia, it is only moderately contagious, many of those exposed escaping the infection.

Weichselbaum, in 1887, isolated and described the specific organism and called it, from its appearance and location, the diplococcus intracellularis meningitidis.

The presence of the specific organism in the secretions of the nose and throat in most of the cases recently examined makes it probable that the disease is transmitted in this way. A nasal discharge was noted in 13 per cent. of the cases, apparently a small per cent., but probably as large as the per cent. having nasal discharge in diphtheria.

One investigator (Scheurer) found the specific organism in the nasal secretion of all of his series of 18 cases. Investigations made during the recent New York epidemic show that meningococci are usually found in the nose and nasopharynx of most cases of meningitis during the first twelve days. After the fourteenth day these can seldom be demonstrated. The organism was found in the secretions of 10 per cent. of persons in contact with the disease.

Recent epidemics have afforded opportunity for careful study of the organism with modern laboratory methods, and several interesting and valuable additions have been made to our knowledge of the disease. For example, Dr. Still some years ago described a type of meningitis which is called in England the posterior basic type. It differs in some ways from the typical epidemic cases. It occurs sporadically and has not been regarded as contagious. Its manifestations are not so violent as the epidemic variety, yet in infants and children it is usually fatal.

Intracellular diplococci are present in the exudate but their identity with or relation to the organisms found in the epidemic variety are not proven. Further study has shown that this

*Read before the Indiana State Medical Association, October 8, 1909.

organism of the sporadic cases has not only the same intracellular location and morphology, but that its staining and cultural features are the same.

Distinct differences, however, are found to exist in agglutination reaction. The organism from the sporadic cases is not agglutinated by serum from an epidemic case and vice versa.

The consensus of opinion now is that they are different strains of the same organism and that the variety of manifestations, bacteriological and clinical, are probably due to variations in virulence rather than to different organisms.

Like most acute infections, cerebrospinal meningitis is most likely to attack children. In the New York epidemic 15 per cent. of the cases were under 1 year and 67 per cent. were children under 10 years of age. That one-third of all cases are adults is evidence that the immunity afforded by maturity is only partial and imperfect.

The period of incubation seems to vary, but is usually from a few days to a week. The invasion period of several days is characterized by discomfort, feverishness and headache. An abrupt onset is so frequent, however, that it is commonly regarded as typical. It seems rather strange that this abrupt onset is more frequent in adults than in children. These prodromal symptoms do not differ from the invasion of any acute infection.

SYMPTOMS.

Of all the symptoms, headache is the most constant. It occurs early and is usually persistent. It may be dull in character, but more often is sharp and excruciating and is a more prominent feature in adult cases than in children. The pain may be diffuse but is commonly most intense at the occiput, and, like most severe occipital headaches, is apt to be accompanied with nausea and vomiting. Vomiting occurs at some period in practically all cases.

Soon after the onset of the headache, or at least after it has become severe, a stiffness or rigidity appears in the muscles of the neck. This symptom varies from a slight, almost imperceptible soreness in the very mild cases, to the most positive rigidity in the severe forms. Motion of the head is usually painful, and passive motion elicits a feeling of resistance.

This rigidity later involves not only the cervical but all the spinal muscles. The rigidity of the neck is one of the earliest symptoms and, with the possible exception of headache, the most constant.

Opisthotonos is so frequently present as to be characteristic. Spasm of the extremities is pres-

ent in children in from 60 to 75 per cent. of cases, strabismus in 50 per cent. and paralysis in about 20 per cent., or in one out of three or four cases with spasm.

Kernig's sign, if present, is of distinct value as a sign of meningitis. It is not present in every case, so its absence is of negative value. In the mild form chilliness or mild rigors are usual. In the severe infections well-marked chills are common. They are not apt to continue.

As in other acute infectious diseases, chills are not usual in children, but are likely to be replaced by convulsions, which occur in about 50 per cent. of all cases in children.

FEVER.

The temperature is notably irregular. It follows no typical course, but may be high at times and again low. Some fever is usually present throughout the attack.

The degree of fever present is of little value in prognosis. A high fever does not necessarily indicate a severe infection and vice versa.

The pulse rate is seldom markedly increased. It may be slow and is notably uncertain and irregular. It bears no constant relation to the temperature. Relative slowness of the pulse to the temperature is frequent in children, is not infrequent in adults, and may be regarded as characteristic. The respiration is usually accelerated. It is characteristically irregular and toward the last may be of the Cheyne-Stokes type.

The abdomen is distended at times, sunken at others, and is of little value in diagnosis. The blood examination shows a marked leucocytosis.

Hyperesthesia of the skin and special senses is frequently present, amounting at times to aesthesia. Tenderness is usually complained of on pressure over the limbs and along the spine, being especially marked in the cervical and lower occipital regions. The tendon reflexes show nothing characteristic, being frequently exaggerated in the exciting stage and absent in the depressed stage.

MENTAL STATE.

Notwithstanding the acute character of the pain, the mental condition tends to dullness and apathy. The patient desires to be let alone.

Delirium of variable intensity is common in children, frequent in adults, followed in severe cases by coma. Herpes is a sign of some value, being present in about the same per cent. of cases as it is in pneumonia. While in the popular mind petechiae are so generally associated with the disease as to designate it spotted fever, they are probably present in less than 20 per cent.

After the patient has begun to improve, or has even made considerable progress toward recovery, relapses frequently occur and are often fatal.

DIAGNOSIS.

Elaborate lists of comparative symptoms in parallel columns for differential diagnosis between the various forms of meningitis have been tabulated. While each form may have its typical mode of onset, signs and symptoms, many of the symptoms are common to all forms of meningitis and their clinical differentiation is frequently difficult and often impossible.

Dr. Morse has well pointed out that meningitis in infancy differs in its onset and clinical course from that observed in older children, and that there is no characteristic mode of onset, sign or symptom that is pathognomonic of any certain form.

The prodromal history, signs and symptoms regarded as typical of one form may be observed occasionally in other forms, and undue reliance upon these for differentiation will result in error.

With all the available features in the case—i. e., family and personal history, environment, mode of onset, signs and symptoms—a differential diagnosis can usually be made.

With a vague or obscure history, an atypical onset and a common or general symptomatology, clinical differentiation is frequently impossible. Only a careful examination of the cerebrospinal fluid will supply the desired information.

The operation is not a particularly formidable one, but demands scrupulous cleanliness. It has been attended with so little inconvenience, is so free from danger and the results have proven of such value that the procedure is now regarded by those who have used it as a routine measure.

LUMBAR PUNCTURE.

The procedure, as its name implies, consists in the introduction of a needle or a trocar and canula into the lumbar region of the spinal canal for the purpose of withdrawing cerebrospinal fluid.

In a young child an ordinary long hypodermic needle will answer, as the canal in these is only 2 to 3.5 cm. from the surface; that is, $\frac{3}{4}$ to 1 $\frac{1}{4}$ inches.

In adults a long aspirating needle of fair caliber or a small trocar and canula is preferable, as in muscular or fleshy adults the canal may be as much as 6 to 7 cm.; that is, about 2 $\frac{1}{2}$ inches from the surface. The puncture may be made anywhere from the second or third lumbar intervertebral space to the space between the last lumbar and the first sacral vertebra, called by

Chipault the sacro-lumbar foramen. In any of these spaces there will be little probability of striking filaments of the cord; yet it is sufficiently high to enter the canal.

The simplest landmarks are probably the iliac crests, usually about on a level with the spinous process of the fourth lumbar vertebra. The puncture may be made in the child in the median line, but in the muscular adults the thickness and density of the ligamentum interspinosum makes it preferable to enter about $\frac{1}{2}$ inch either to the right or to the left of the median line.

In acute cases an anesthetic is seldom required. I have found that the patient is usually sufficiently stupid to offer but little resistance. A passive condition is almost imperative, however, for a satisfactory puncture, inasmuch as a struggling child or a patient with an active delirium may catch the needle between the bending vertebrae and snap it off in the spinal canal. I have had this accident happen, and the feeling produced is not a comfortable one. If there is any doubt about securing passiveness an anesthetic should be used, especially if the operator has not had experience. After the operation has been performed repeatedly, considerable dexterity is acquired in plunging the needle directly into the canal without having to feel the way. The beginner should not attempt any plunging, as he will probably strike the body of a vertebra, dull, bend or break his needle, and contaminate the fluid when he does find it with blood from the lacerated tissues. It is important that the fluid be free from blood, as its presence nullifies one valuable feature in diagnosis, viz., the character of its cellular content.

As to the position of the body: some prefer to have the patient sit up, claiming that the flow is thereby facilitated. An objection to this is that in very sick patients the position is a painful one, and is apt to produce restlessness, especially if it has to be maintained for some time. I prefer to place the patient on his side on a table or firm couch, have an attendant flex the head and legs, thus rounding out the spine and separating the spinous processes. In this position I have seldom failed to secure fluid.

In fibrinous, flocculent or heavy purulent fluid the needle will occasionally become occluded. If this occurs it should not be withdrawn, but the syringe be detached and a wire used to clear the needle. In this particular the trocar and canula is superior to the needle. It has the material disadvantage, however, of providing no suction. With a limpid fluid and a large canula the flow will usually be sufficiently rapid; yet, if much fluid is to be withdrawn and there is little or no

pressure, or the fluid fibrinous or flocculent, the process is tedious, and a good tight aspirating syringe greatly expedites the procedure.

The clinical appearances of the fluid withdrawn is of some diagnostic value. In the cerebrospinal variety the characteristic appearance is purulent or sero-purulent. Tubercular meningitis, on the contrary, yields a fluid that is usually clear or only slightly turbid. This gross appearance of the fluid is of limited value and subject to many variations and exceptions, but it may at least be said to be suggestive.

For a bacteriological examination the fluid may be centrifuged, or allowed to settle; the sediment smeared, stained and examined. Usually quite readily and almost always by careful, patient search the organism present can be detected. In the few cases in which this procedure gives negative or uncertain results recourse may be had to culture growths, or to animal inoculations, or to both.

A further procedure in the microscopical examination of the fluid is of positive value, and that is the determination of the variety of cells present. In the cerebrospinal cases the cells present are decidedly of the multinuclear variety. In the tubercular cases the lymphocytes preponderate.

TREATMENT.

Our former methods of treatment have been symptomatic and empirical. We cannot feel assured that they have been more than palliative. Morphin or its derivatives should be used to control the pain. While some writers discredit the coal-tar products, I believe phenacetin supplements the anodyn effect of morphin or codein. Ice bags to the head and hot tub baths give some relief. Counter-irritation, while generally practiced, is of doubtful utility. A mild counter-irritant does no harm, but blisters are easily produced, and these are frequently followed by sloughing. Bier's hyperemic treatment, by compressing the neck, has been tried in a few cases, with apparently favorable results.

Lumbar puncture has been used not only for diagnosis, but as a therapeutic measure. While it has not succeeded in materially reducing the mortality, it is unquestionably indicated in certain cases. Relief of pressure symptoms is often marked.

THE QUANTITY OF FLUID TO BE WITHDRAWN.

Most writers, I have found, suggest removing 15 to 30 c.c. There can, in my opinion, be no arbitrary rule. The amount withdrawn should depend upon the age and condition of the patient, the type and stage of the disease, the clinical

appearance of the fluid itself, whether clear, turbid or purulent. If the fluid is clear and apparently normal, enough should be removed to centrifuge and examine, and to relieve pressure if it exists.

If, on the other hand, the fluid is found to be markedly turbid, fibrinous or purulent, I have no fixed limit, but remove all I can get. With such conditions present I regard it as analogous to draining an abscess.

SERUM THERAPY.

At the time of the great fatal epidemic in New York City, 1904 and 1905, a medical commission was appointed, consisting of the city's most eminent and capable physicians. They were asked to examine the causes and conditions giving rise to the outbreak, investigate the method or methods of its transmission and recommend measures for its eradication and control.

To Dr. Simon Flexner, a member of the commission and medical director of the Rockefeller Institute for Medical Research, was assigned the task of experimenting on the production of an antimeningitis serum. While the details of his methods have not been published, it is understood that by successive inoculation of the horse he has evolved a serum of considerable potency. The results achieved with it so far surpass any method of treatment we have heretofore employed that they may almost be said to be sensational. To my mind the discovery bids fair to mark an epoch in medical history analogous to that of the discovery of diphtheria antitoxin.

The serum has been under experiment now between two and three years. It has been used in various epidemics widely distributed—in Ireland and Scotland and in this country from Massachusetts to California.

By courtesy of Dr. Flexner the serum is available to the profession in Indiana. I will be glad to supply it free of charge to any physician who has a case of cerebrospinal meningitis and who wishes to test it. The only conditions imposed are that a careful clinical record of the case be kept and bacteriologic examinations made of the cerebrospinal fluid, and that these records and reports be returned promptly.

The effect of the serum on the cerebrospinal fluid is phenomenal. The turbidity promptly clears up, the purulent condition is markedly diminished.

The meningococci are materially reduced in number, and of these a much larger per cent. are found within the leucocytes, indicating a diminished virulence of the organism, or an increased phagocytic activity of the cells, or both.

The action of the serum is probably bacteriolytic rather than antitoxic; i. e., it destroys the bacteria rather than neutralizes a toxin. Here, then, is a further justification of the suggestion of free drainage of the spinal canal. The indications would seem to be to reduce to the minimum the infected fluid upon which the serum must act, and so increase its bacteria destroying power.

The effect of the serum on the clinical course of the disease is equally striking. The temperature usually falls distinctly within twenty-four hours after the injection. If the injection has been made early and the infection is not too virulent the fever may not recur. It may rise again to yield to a second or third injection before it is permanently reduced. A termination by crisis as distinct as that in pneumonia is not uncommon.

Perhaps even more striking than the action on the temperature is the effect of the serum on the mental condition of the patient. The mind frequently clears with surprising rapidity and usually remains so. The tendency to spasm is controlled. The pain and restlessness promptly subside. The muscular rigidity does not yield so promptly, but may persist in a modified degree until convalescence is well advanced.

The serum is put up in small bottles containing 15 c.c. It should be kept on ice, but warmed to body temperature before being injected. The injection must be made directly into the spinal canal. The serum is practically inert if injected subcutaneously.

From 15 to 45 c.c. may be injected at one time, and repeated daily if indicated. As much cerebrospinal fluid should be withdrawn as the amount of serum proposed to inject, if it is possible to secure the amount.

No untoward results have been observed that could fairly be attributed to the serum. A few accidents have been reported where little or no fluid was withdrawn and a full dose injected.

It must be clearly understood that the serum is purely and only a meningococcic serum; that is, it is potent only in the cerebrospinal variety of meningitis. It is without effect on tubercular meningitis, pneumococcic or staphylococcic meningitis, or any other form except that due to the presence of the meningococcus. This fact should not, however, be taken advantage of to the extent of making the physician dilatory in employing the serum in any case where there is a reasonable suspicion that the disease is of the cerebrospinal variety. The patient should receive the benefit of the doubt. The differential diagnosis can be worked out later, for if it prove to be of some other variety no harm will have been done.

The mortality tables compiled according to age show some striking figures. In children under 1 year of age the mortality formerly was practically 100 per cent. Under the serum treatment it has been reduced to 50 per cent.

The mortality tables by the period of injection are suggestive. In cases injected first to third day the mortality was 25.3 per cent.; cases injected fourth to seventh day, the mortality was 27.8 per cent.; cases injected later than the seventh day, the mortality was 42.1 per cent. In other words, in the cases receiving the treatment in the first week the mortality was little more than 25 per cent.

We note here the analogy to diphtheria antitoxin, i. e., the value of the serum is greatly enhanced if administered early.

Another striking and gratifying result of the serum treatment is that the number of sequelæ, i. e., physical deformities and mental defects formerly so large, have been proportionately reduced.

In conclusion I would say that a conservative estimate of the results of the treatment with Flexner's serum might be stated as follows:

In pure meningococcic infection the serum, if administered early and in sufficient quantity within the spinal canal, reduces the number and virulence of the organisms and stimulates the phagocytic action of the leucocytes; lowers temperature and alleviates the pain, delirium and coma; shortens the course of the disease, terminating it abruptly by crisis at times; reduces the frequency of complications, relapses and sequelæ, and materially lowers the mortality.

DISCUSSION.

DR. JOSEPH COLLINS, of New York, was asked to open the discussion on this subject. He said: This is a subject in which I have had more or less experience, and I am glad to avail myself of this opportunity to testify as to the efficiency of the Flexner serum. Since Dr. Flexner introduced this serum there has been a great deal of opportunity afforded, not so much in New York as in Boston and in certain parts of England, and with conditions that fulfil the requirements as to whether or not it is an efficient agency in curing the disease in France. When Dr. Flexner reported upon this subject at the Association of American Physicians in Washington in May he told us that within the previous two months there had occurred an epidemic of cerebrospinal meningitis in South Paris, which was under the observation of bacteriologists and physicians to such an extent that the conditions necessary for adequately testing the serum were being met. Until that report is published we are in the same quandary—we are in doubt as to whether or not

it fulfils the same position that the diphtheritic serum does in cases of diphtheria. So far as its efficacy was proven in the New York epidemic it may be stated that the mortality was reduced to 50 per cent. In the New York epidemic, as you probably very well know, the death rate was not very high. About 25 or 30 per cent. of the patients recovered under such medication as was considered to have no effect upon the course of the disease. It was only during the tail end of the epidemic the serum became valuable. Whether or not the marked decrease in the mortality was due to the use of the serum, or whether it was like all other epidemics which in their terminal stages have a much lower mortality rate, no one can say. Dr. Flexner was not at all satisfied with the condition for the testing of the serum, and I think he has not been until an opportunity was recently given in France. So much for my expression of opinion concerning the serum. I may repeat that we have in it an agency for the control of this disease which is bound to make good.

In regard to one or two features of the disease the matter can be summed up in a few words. It is due to an organism which produces pus and whose habitat is within a closed cavity, and pus within a closed cavity is bound to be fatal. Epidemic cerebrospinal meningitis is caused by the diplococcus of Weichselbaum, and the only way of curing the disease is, if pus has formed in considerable amount, by giving a substance that kills the bacteria, and I think we are probably in possession of that agent.

In regard to the diagnosis, there is nothing specific about the subject of epidemic cerebrospinal meningitis. I do not care how acute the diagnostic acumen of the practitioner may be. There are cases after cases in which the practitioner is unable to differentiate this disease from other spinal cord conditions. In the epidemic of anterior poliomyelitis which occurred in Vermont one-third of the cases were considered to be epidemic cerebrospinal meningitis. Therefore the differentiation in some instances is impossible. We are in possession of measures for diagnosis that should be used in the most routine way, and what I particularly want to say is that there is no more necessity for precaution or antiseptic measures in the use of spinal puncture than in giving a hypodermic injection. In the cases that have come into my ambulatory clinic in New York over 6,000 spinal punctures have been made without observing the slightest disagreeable results. I resort to spinal puncture in my cases as a routine measure very much as I would give hypodermic injections. The only precaution I take is to instruct the house staff to see that the needle is clean. After a slight experience in it you can take any patient, ask him to bend out the lower part of his back, and thrust a needle into the spinal canal without the slightest difficulty, and this will enable you to make a diagnosis in prac-

tically every instance. This should be done in every case. When you are called to see a child who has evidence of spinal rigidity, opisthotonos and headache, or in which there is a suspicion of involvement of the roots of the meninges or of the spinal cord itself, spinal puncture should be resorted to, because in reality that is the one measure in which we are to put absolute faith in the differentiation of these two diseases, namely, anterior poliomyelitis and epidemic cerebrospinal meningitis. Finally, we are in reality on the threshold of stamping out one of the most disgusting and deforming diseases that mankind is afflicted with.

I think the writer of the paper in closing the discussion should tell us where this serum can be obtained, because it is in the possession of certain men in the community. It seems to me there should be opportunity for physicians in certain cases to telegraph to Fort Wayne or to Indianapolis and get the serum at once, and get a person who is capable of making a bacteriological examination, in order that statistics testifying to its efficiency may be in the hands of Dr. Flexner within a comparatively short time.

DR. JAMES P. SIMONDS, Indianapolis: This paper and the discussion have, I am sure, been as intensely interesting to all of you as it has been to me. I cannot add anything to the discussion except to answer the last question raised by Dr. Collins. Dr. Hoskins referred to the fact that this serum can be obtained from various physicians in Indiana. At the laboratory of the State Board of Health we have some of this serum for distribution, and I believe they also have it at Bloomington, so there are two places I know of where this serum can be obtained. What Dr. Flexner wants, of course, is to place this method of treatment on a thoroughly scientific basis before it is placed on a commercial basis, and it is necessary that as many cases as possible be studied in a scientific way as can be done. Dr. Flexner furnishes the serum only on one condition, namely, that accurate and full histories be kept of the cases, which includes a bacteriological diagnosis, and that these histories be sent to him. We have at the laboratory at the State Board of Health an outfit which can be grabbed at any moment, and some one go from the laboratory and do the spinal puncture, make a microscopical examination and inject the serum at one sitting. This will place the serum in as available form for physicians as can possibly be done. Where the cases are too far from Indianapolis we have sometimes not gone, but have sent the serum. I may say we have had about four calls for the serum, but no one of the cases proved to be real epidemic cerebrospinal meningitis. Most of them were probably tubercular; possibly some were due to digestive disturbances, as sometimes happens in children, and the trouble manifests itself in cerebrospinal disturbances. Where we can go the

microscope is taken, the microscopical examination is made, and the serum injected at one sitting, if the case proves to be one of epidemic cerebrospinal meningitis. Where we cannot go the serum is sent, with instructions that cerebrospinal fluid be withdrawn, and if it proves to be distinctly turbid, or purulent, the serum will be injected after a certain amount of cerebrospinal fluid has been withdrawn, and the fluid is sent to the laboratory for further diagnosis, and if it proves to be a positive case more serum is sent by the time it is needed. We have had one case of this kind in which the cerebrospinal fluid was not distinctly turbid, and it proved not to be cerebrospinal meningitis. I think this serum is about as available as it can be under the circumstances in Indiana.

There is one thing I might say with reference to this organism and the action of the serum. There are two kinds of organisms, so far as the production of toxins is concerned, those which produce ectotoxins, such as the diphtheria bacillus, that is, throw off toxins from the bodies of the organisms. On the other hand, there are those bacteria which produce endotoxins, and set them free, and with the bacteria go into solution. The meningococcus belongs to the latter class, and its toxin is extremely powerful. This has been shown by an experiment that was done in Hektoen's laboratory about two years ago, an account of which was published in the *Journal of Infectious Diseases*. I might have prefaced the description of that experiment by stating that the meningococcus very readily undergoes lysis, and goes into solution.

DR. L. F. WOLLERY, Bloomington: It was my great pleasure last year while visiting the Children's Hospital in Boston to have seen a number of cases of epidemic cerebrospinal meningitis. Dr. Dunn, who is on that service, had the largest number of any man in the country, and he has worked out the data of the results of the treatment prior to the use of serum and since then. He has worked out all of the different methods of treatment which were tried before and up to the time of the use of the serum. Before the use of the serum the mortality from this disease ranged around 80 per cent. and did not go any lower. Diphtheria antitoxin was used, lumbar puncture was used, and treatment with bromids was used, and all of these different things, but no particular treatment seemed to lower the mortality percentage until the serum was used, and then the mortality went down from 80 per cent. to 20 per cent. In those cases in which the serum was used in the first week of the disease the mortality was less than 16 per cent.; in those gotten in the first four days the mortality was as low as 8 per cent.

Another point showing the great value of the serum is the treatment of infants under 1 year of age. Of 22 cases which occurred in one year, 11 died, and 11 recovered under different methods of

treatment. In those that recovered the serum was used. So you can see that there is every evidence that this serum is going to repeat the history of diphtheria antitoxin right straight through. The earlier you use the serum the better and more specific the results. But do not think that the chronic cases of cerebrospinal meningitis cannot be benefited. As long as the diplococcus intracellularis is present in the exudate you may give the serum and expect results. This has been proven not only in Boston but all over the country. Different observers have sent in reports of their work in the use of the Flexner serum with good results in the chronic cases. There have been two epidemics which show and prove the value of the Flexner serum, one in Akron, Ohio, and the other in California. Some of the first cases did not receive the serum, and the mortality of these was 93.1 per cent. Of those who received the serum the mortality was 25 per cent. Those points are conclusive without any question. You can see a rapid running of the bacteria into the cells. At first extracellular, but after you have given the serum they are intracellular, and in a few days the bacteria disappear entirely. Bacteriologically, you get a patient who is running a high temperature, who has opisthotonos, who is probably unconscious and is in a comatose state. I have gone into the wards twenty-four hours after the first dose of the serum and the patient's condition has completely changed. Instead of finding a comatose condition the patient's temperature would be found normal and he would have a smile. These things are proof positive of the value of the serum when you can see the clinical signs of the disease change so markedly, and there is no reason why you should hesitate to call for the serum.

I want to speak of one point Dr. Collins referred to, namely, putting the technic of lumbar puncture on a level with the use of the ordinary hypodermic injection. This may be all right for Dr. Collins, and I have no doubt that his technic is just as good as it would be in giving a hypodermic injection or in doing any surgical operation. But there are two cases on record in Boston where one patient got streptococcal infection and another staphylococcus infection from lumbar puncture. Of course, the technic there was not good. I have seen hypodermic injections given by some physicians who, if they used the same technic in doing lumbar puncture, would have disastrous results, so that the technic must be as perfect as possible.

DR. J. N. HURTY, Indianapolis: I want to emphasize one statement made by Dr. Simonds with reference to the laboratory of pathology of the State Board of Health, namely, that he is ready at any time to go out into the state to make a microscopical examination of any case of epidemic cerebrospinal meningitis and inject the serum. He is always prepared to do this work

without charge. He has a complete outfit for the work.

As Dr. Dodson of Chicago is here. I would suggest that he be invited to speak on this subject.

DR. JOHN M. DODSON, Chicago: Fortunately for us in Chicago, we have not had an epidemic of cerebrospinal meningitis; but in the last five or six years a considerable number of cases have been accumulated in which the serum has been used. We have had quite a few cases in my service in the Presbyterian Hospital, and certainly there is every promise that in the serum we have an agent which is of great value. I feel a little in regard to it as I did in the early days of antitoxin, when in discussing this subject Babinski, you doubtless remember, in giving his experience with regard to diphtheria, stated that he did not need a large body of statistics to prove the great value of antitoxin in diphtheria. Anyone who had seen cases of diphtheria under the older treatment die under his eyes, unable to do anything for them, and then see the diphtheritic membranes dissolve in a marvelous manner and the condition of the patients improve after the use of antitoxin, must be convinced. The few cases we have had at the Presbyterian Hospital have seemed to be of that sort in which the serum was used, in that there was a remarkably striking immediate improvement of the symptoms, the lowering of temperature, the relief of the spasm and pain being very impressive indeed.

I should like to say a word or two in the way of caution in regard to the use of serum. It seems to me we are likely to do the cause harm by its injudicious use. I think it is illogical, with our present knowledge, to use the serum until a diagnosis has been made, where it is possible in the hands of any man with a reasonable knowledge of bacteriology. Lumbar puncture is performed, the cerebrospinal fluid is easily withdrawn, and a microscopic examination of the sediment obtained, and a cover-slip preparation is just as reliable in making a diagnosis as a culture. It is extremely rare that one fails to find diplococci in the cells that will appear in the culture. The diagnosis is a matter of a few minutes, and if it is made before the serum is injected it is more reliable. While the serum has been used in several thousand of cases and there have been two accidents, I have had one case in my experience where an enthusiastic assistant in injecting the serum did distinct harm. It was a case of tubercular meningitis, as was subsequently proved, and the symptoms were aggravated by the injection of the serum. It made a deep impression upon me, and I resolved there and then not to use the serum until the diagnosis has been made, and this is easily done. The serum is a pure specific for the diplococcus meningitidis. So far as we have any knowledge, it is of no avail in the other forms of meningitis, and while it may do no harm, it does no good. I would emphasize, then, the importance

of making a diagnosis by means of lumbar puncture and examining the fluid before the serum is injected. There is special argument for this in the fact that the matter of an hour or two is not as urgent as in a case of diphtheria. In diphtheria, of course, we adopt a plan of giving antitoxin immediately if the diagnosis is suspicious, because oftentimes we cannot make a positive diagnosis of diphtheria in 24 hours, and the loss of that time is important. With meningitis that is not the case, as the loss of two or three hours is not material, and the diagnosis can usually be made within a very short time.

DR. H. R. ALBURGER, Bloomington: With regard to the availability of the serum, Dr. Hurty has mentioned how it can be obtained from the state laboratory. One of our men went to the Rockefeller Institute, and obtained from Dr. Flexner the serum, and uses it in connection with the department of pathology of the Indiana University. At that time he signified his willingness to go out to charity cases in order to investigate the work with this serum. Since that time we have only been called upon five times to investigate cases that were suspected of being cerebrospinal meningitis. This argues in connection with the State Laboratory that there is a singular absence of the disease in the state, or there is a singular lethargy on the part of physicians in taking this opportunity. Physicians are suspicious of anything free. This is not a question of commercialism, but of trying to do some good, and of helping physicians in their fight against this disease.

Dr. Hurty informs me that he has received reports of 14 deaths from epidemic cerebrospinal meningitis within the state within a year.

DR. HURTY: Yes, and one report within a month.

DR. ALBURGER: It seems to me, physicians throughout the state should take advantage of the opportunities to have some one go and institute treatment in these cases. It means that they have at their hands these laboratory facilities given to them for nothing, and the work is done by skilled men. The physicians of the state are not taking advantage of the opportunities that they should for combating this extremely serious and dangerous disease. Let us remember this one point: When you have a suspected case early, or you are suspicious of the condition of the patient, do not hesitate to call upon some man who is doing this work to help you in making the diagnosis. You may equip yourselves with the necessary thing without expense. Go and investigate these cases and apply this great specific treatment. Take advantage of these things. Do not be unbelievers. I fear that some of us have to be hit in the head, so to speak, to make us realize that something is going to do us good. Let us help Flexner in this fight. He is not a commercialist; he is not in private practice; he is employed by the Rockefel-

ler Institute to do these things, and we are his advance agents in bringing this before the medical profession and attempting to save lives. Let us try to get together and avail ourselves of these opportunities. A telegram will bring one of these men to you to help you out in one of these cases.

DR. LEONARD F. SCHMAUSS, Alexandria: I think Dr. Alburger will find an improvement in these conditions if general practitioners will take advantage of the opportunities he has mentioned.

I had a case of cerebrospinal meningitis a week or ten days ago, and would have been only too glad to have availed myself of these opportunities had I known where to go. The serum would have done great good, but as it was the patient died. If I had had the serum I should have used it. Lumbar puncture gave considerable relief for an hour or two, but the patient grew worse. I then made a second puncture, but it had no beneficial effect. I am very glad to know where we can send to get this serum.

I would like to say a few words in regard to lumbar puncture. This is not an operation to be compared with hypodermic injection. Lumbar puncture is an operation which should be compared with puncture of the pleural or abdominal cavity, and I am sure any of you will have trouble if you do not take more precaution than nine-tenths of the physicians do in giving a hypodermic injection. In giving a hypodermic injection, if you get infection from it, it is superficial. It is beneath the skin; but if you get infection of the spinal cord you have a serious thing to deal with. It is necessary to take the precaution in resorting to lumbar puncture to have the needle sterilized by heat, and be sure to sterilize the skin. There are two things I would like to draw attention to in making lumbar puncture in regard to the needle. The needle-point should not be too pointed; it should never have a point like an aspirating needle, because it will be broken in coming in contact with bone, and you may get a part of the needle broken off in the spine, which will cause trouble. First, the needle-point should not be drawn out too long. Second, it should not be too small. It should be of at least medium size, and of good caliber, because in introducing the needle it may become clogged with blood, or a little tissue may get into the point of the needle, and you will wonder why you do not get the escape of fluid, but by putting in a stylet the fluid will escape. Unless these things are borne in mind you are apt to fail in getting results.

In regard to the diagnosis, it depends upon the results of the serum. I try to make an early diagnosis in these cases. In this particular instance the patient was brought in as a case of typhoid fever, having been seen by one physician who made that diagnosis, and as soon as I saw him I noticed it was a case of cerebrospinal meningitis. Furthermore, the history was against typhoid fever, and lumbar puncture cleared up the diagnosis.

Another point to which I wish to draw your attention is that cerebrospinal meningitis may sometimes be confounded with cases of uremia. I got hold of one case that was sent to the detention hospital from Chicago as a case of uremia. In that case I had the testimony that there was albumin and acid urine. In this disease, as in pneumonia and other acute conditions, we have nephritis and must be careful in excluding them, so that lumbar puncture will clear that point up if the symptoms themselves are not against it.

DR. HOSKINS (closing the discussion): We have had practically no severe epidemic of cerebrospinal meningitis in Indiana for years, but some day it will hit Indiana as it hit New York and other places, and my object in writing this paper was to inform the profession that this method of treatment is available. I question whether the reports which come to the State Board of Health are adequate in every way as to the amount or number of cases of cerebrospinal meningitis in the state. It is probably true that patients die of cerebrospinal meningitis without a thorough or accurate diagnosis having been made. Any one who has seen very much meningitis knows that there are a great many cases called cerebrospinal meningitis that are not such. It may be that there is a meningitis from an infected ear, and frequently in children these cases are tubercular in origin.

As to the technic, I have no disposition to consume your time in arguing that point.

There is one thing I want to say in reference to the position taken by Dr. Dodson as to desirability of withholding the serum treatment until an absolute diagnosis is made, and that is this: I appreciate the scientific spirit of his attitude. It is desirable, of course, to give specific medication when you can, and ordinarily perhaps most of us have facilities with which a diagnosis can be made in an hour or two, but that is not always true. Once in a while, out in the country, you cannot get a diagnosis right away unless you make a gross diagnosis from the clinical appearance of the fluid and from the general symptoms. When you are out in the country and have not a laboratory available, and the clinical symptoms tend to support the diagnosis of cerebrospinal meningitis, and the clinical appearance of the fluid withdrawn corroborates that, I would be inclined to inject the serum on suspicion. If it were my baby, I would want that done.

There is a tendency in these days to increase the dose of the serum. The early administration of the serum is important, but there is a tendency to give larger doses. Instead of giving 15 c.c., we give 30 or 45 c.c. as the initial dose, which does not have to be repeated so often, and the patient gets well promptly.

With regard to ignorance as to where the serum can be obtained, I would support Dr. Alburger on that. It has been announced through the medical journals for more than a year as to where this

serum can be obtained, and there are three or four different men in Indiana who have the serum. It has been announced that I would send it on demand if the conditions were complied with. Even the newspapers have advertised it. I hope the members will not go away from this meeting with no idea as to where this serum can be secured. (THE JOURNAL has repeatedly called attention to the value of the serum and given full information as to where and how the serum can be obtained.—Ed.)

STANDARDIZATION OF MEDICINAL PREPARATIONS.

A. D. THORBURN, PH.G.
INDIANAPOLIS.

The word "assay" is defined in dictionaries as the "determination of the quantity of any metal, especially gold or silver, in an ore or alloy."

Since gold or silver is the most precious part of the ore, the estimation of the amount present is a matter of great importance to the person who buys the ore. No person of common sense and no commercial smelter would buy ore, dirt from a hole in the ground, without knowing something of what the ore contains. No mine would sell its ore without knowing something of what it contains.

To assay means to analyze for one part; that is, to find what proportion this one part bears to the entire mass of substance.

This is a very common commercial practice; even such stuff as waste tankage from the stock-yards is bought and sold on analysis or assay. Lye and glycerin waste from soap making is bought and sold on assay. Argols, the crude residue from fermenting grape juice and used in making baking powder, cream of tartar, etc., is all bought and sold on assay. A great many creameries buy milk on assay, paying in proportion to the butter-fat in the milk. To buy and sell on assay is a common commercial practice and protects the interest of both buyer and seller.

Now be sure to understand this definition: that to assay means to find the proportion of any one important part to the entire quantity examined.

The application of this idea to crude vegetable drugs as at present understood has been developed during the last century, though the crude drugs involved have been known a thousand years or more. Both crude drugs and finished preparations are now assayed not only as a means of fixing the commercial value, but also as a means of fixing the medicinal value.

In 1803 Derosne in Paris, separated from opium a crystalline substance which he called opium-salt and which must have been a mixture of morphin and narcotin.

In 1804 Seguin also prepared this article.

In 1806 Serturner discovered that he could separate from opium a crystalline article that was alkaline, like ammonia, and he named it morphium. It was soon found that this article, when administered, gave many of the effects of opium.

In 1817 Serturner again called attention to morphium, and this second publication awakened much interest. It was thought that other plants might contain a substance which would represent their physiologic action in the same way that morphin represented the effects of opium. Many investigators began to study along these lines, and the following results were announced:

Year.	Obtained from.	Alkaloid.	By.
1806....	Opium.	Morphin.	Serturner.
1817....	Opium.	Narcotin.	Robiquet.
1817....	Ipecac.	Emetin.	Pelletier and Magendie.
1818....	Sabadella.	Veratrin.	Meissner.
1818....	Nux Vomica.	Strychnin.	Pelletier and Caventou.
1819....	Nux Vomica.	Brucin.	Pelletier and Caventou.
1819....	Pepper.	Piperin.	Oersted.
1820....	Coffee.	Caffein.	Runge.
1820....	Cinchona.	Cinchonin.	Pelletier and Caventou.
1820....	Cinchona.	Quinin.	Pelletier and Caventou.
1820....	Solanum Nig.	Solanin.	Desfosses.
1823....	Mustard.	Sinapin.	Henry and Garot.
1826....	Species of Corydalis.	Corydalin.	Wackenroder.
1826....	Species of Xanthox.	Berberin.	Chevallier and Pelletan.
1828....	Tobacco.	Nicotin.	Posselt and Reimann.
1829....	False Cuprea Bark.	Aricin.	Pelletier and Corriol.
1829....	Sanguinaria.	Sanguinarin.	Dana.
1830....	Curare.	Curarin.	Rollin and Bous-singault.
1831....	Conium (Hemlock).	Coniin.	Geiger.
1831....	Belladonna.	Atropin.	Geiger and Hesse.
1832....	Opium.	Codein.	Robiquet.
1832....	Opium.	Narcotin.	Pelletier.
1833....	Cinchona.	Quinidin.	Henry and Delondre.
1833....	Aconite.	Aconitin.	Geiger and Hesse.
1833....	Colechicum.	Colchicin.	Geiger and Hesse.
1833....	Hyoscyamus.	Hyoscyamin.	Geiger and Hesse.
1835....	Opium.	Thebain.	Pelletier and Thiboumery.

These discoveries were the first steps in assaying these drugs; that is, we cannot assay an ore unless we know what to assay for. We can analyze an ore and find out all the ingredients, but to assay means to find out how much of one important or valuable article is present, and we cannot do this unless we know what that one important article is. The work of 90, 80 and 70 years ago told us what definite distinct individual articles were to be found in these crude drugs named above, and so is the basis of our present work on assaying and standardizing. Keep in mind these facts and dates of the dis-

coveries of alkaloids made nearly 100 years ago and you can enjoy the joke when you read the following statements made by pharmaceutical houses that claim to be pioneers in this work:

"Twenty-five years ago pharmaceutical assay methods were extremely primitive and the whole scheme of valuing drugs and drug preparations by their content of active principle was regarded as visionary and impracticable." "We held a different view; the difficulties in the way were, indeed, great, but we did not believe that they were unsurmountable" (neither did the discoverers of the alkaloids who showed how to overcome these difficulties 50 years before the above firm thought about the subject) "and the success since achieved proves conclusively that we, and not those who opposed and ridiculed our pioneer work, were in the right." Pioneer work done 50 years after the discovery is a new kind of pioneer work.

Historically, the next step in the development of drug assay was to find out how much of these alkaloids was to be found in the crude drug. During the last seventy years or more, there have been reports on this point published by a great many investigators. Since 1852 the proceedings of the Am. Phar. Ass'n. have contained a number of papers reporting the percentages of these active principles in crude drugs. Similar papers have been presented to the Phar. Society of Great Britain and such societies in France and Germany. Some crude drug houses and some manufacturing pharmacists have published yearly reports giving assays of crude drugs passing through their stock. Some of this work has been done in colleges of pharmacy. By thus bringing together a number of reports covering a number of years on any one of these drugs, it is possible to form a fair opinion as to the average amount of alkaloid present in this drug. Examples of such work is shown by the following tables from Allen's Organic Analysis:

Opium. Percentage of Morphin	Henbane. Parts of Total Alkaloid per 1,000.	Cinchona. Percentage of Total Alkaloids.
16.75	1.602	6.04
7.00	1.550	6.34
5.88	1.729	5.28
7.30	.690	5.12
2.10	.667	5.40
8.50	.592	2.32
6.00	.689	4.51
6.93	.701	2.05
8.85	.295	2.65
9.80	.390	8.52
6.76	.451	3.37
12.30	.656	6.39
12.30	.....	5.18
11.69	.....	3.42
9.60	.....	....
7.57	.....	....
10.20	.....	....
12.30	.....	....

We have now developed two parts of the idea of standardization:

First, finding an important active article in the crude drug.

Second, getting a fair statement as to the quantity of this article that can be reasonably expected to be in the crude drug. All this was a matter of very slow growth. It represents the work of a great many men. No one firm, no one laboratory, no single individual has done it all. There is work enough to keep everybody busy, and because so many people have been at work on this question is a very good reason for thinking that the beliefs which now prevail are reasonably correct. All these drugs are not assayed by the same method. In some cases, as in the separation of morphin from opium, this is done by making an aqueous extract of opium and then precipitating the morphin by adding ammonia water or some other alkali, as lime. To separate atropin from belladonna we must make an aqueous extract and then, after adding an alkali, wash out or shake out the alkaloid from this watery solution by using chloroform. In some other cases, such as the separation of caffen from coffee, it was found advisable to make a watery extract, separate the tannin and other substances by adding solution of lead subacetate, filtering, precipitating the excess of lead with hydrogen sulphide and then separating the alkaloid by adding ammonia and ether. Very slight changes in this work sometimes make great differences in results, and so the method of assay is a complicated part of this subject, which it is not advisable to present at this time in great detail. It was, however, very necessary that there should be a satisfactory method before uniform results of analysis could be obtained and before standards for these drugs could be fixed. We have, therefore, three important features in standardizing a crude drug:

First, to find an active article in the drug.

Second, to find a working method that will get this active article out of the drug.

Third, to get a fair estimate of the amount of this active article that would be found in an average sample of the crude drug.

As we said before, the work along these three lines has been in progress for 100 years by a great many investigators. The Convention for the Revision of the U. S. P., held in 1880, instructed the Committee on Revision that the description of "the articles opium and cinchona shall be accompanied with detailed processes of assay for the alkaloids; and the minimum percentage of total alkaloids to be required in cinchona and the minimum and maximum percent-

age of morphia in opium shall be prescribed in the Pharmacopeia."

The U. S. P. published in 1882 says in the preface: "Whenever any substance is capable of being assayed (provided the assay or valuation is of practical utility) a process is appended."

The description of jalap in the U. S. P. of 1880 required a definite amount of resin in the crude drug, and these three crude drugs, jalap, cinchona and opium and their pharmaceutical preparations, were the first standards fixed by the U. S. P. The U. S. P. 8th gives assays, processes and standards for 14 crude drugs and their preparations. Now we should notice the difference between assaying and standardizing. A standard is a flag, ensign or banner, around which men rally or which they follow; something having a fixed, known value; that which is established by authority, as a rule for the measurement of weight, quantity, value or quality; a specimen weight or measure sanctioned by the government; that which is established as a rule or model; that to which other similar articles must be made to correspond.

The standard for the coinage of money is the proportion of weight of the valuable metal to the alloy as established by law. There is a difference between standardizing and assaying. When a miner brings out a load of black gold-bearing rock from the earth this rock is crushed and sampled, and this sample analyzed to show the amount of gold it contains. That is, this ore is assayed. It may contain two ounces of gold to a ton of ore and be worth \$40.00 a ton; it may contain five ounces of gold to a ton and be worth \$100.00 a ton; it may contain nuggets that bring its value to \$500.00 a ton; but, regardless of its value, it is an assayed ore just as soon as a sample has been analyzed. Now this ore goes to the concentrator and the smelter and from it there is made a finished, useable article, in metallic form, and this concentrated useable metal goes to the mint and there is standardized for coinage into money.

There is a vast difference between the pile of assayed black rock handled by a miner who could not stamp out \$20.00 gold pieces from it, no matter how high the assay showed its value to be, and the standardized, finished, shining, valuable gold money produced by the U. S. mint.

It is not enough, then, to say that a crude drug or a medicinal preparation is assayed. Physicians are not interested in knowing whether the preparation is assayed, but are interested in knowing whether the preparation is standardized; that is, is it something established as a model? Is it something to which other similar articles must be made to correspond, and has it

the same fixed value? Is it a standard established by authority, having at all times a definite quality and value?

When an article is standardized it has a definite value. First, it has been assayed so that we may know what the original article contains; then, acting on this information, we change the original article so that it has the value fixed by law as a standard. The miner's ore was assayed and the precious metal extracted in commercial form, and this commercial form, which might be 70 per cent. pure, 90 per cent. pure or 100 per cent. pure, goes to the mint and is there standardized to a definite purity for coinage into money.

Hydrastis, golden seal, is dug among the wooded valleys of Indiana, West Virginia or Kentucky, is sent to crude drug houses and offered for sale, with a statement of the amount of alkaloid it contains; that is, it is assayed. It might be rich in alkaloid, or low in alkaloid, but in either case it might be assayed.

Belladonna leaves are gathered in England, and before any American firm will buy them they are analyzed or assayed and offered for sale with a statement of the amount of alkaloid they contain. But that does not mean that these drugs are standardized, or that a standardized elixir, tincture, fluid extract or tablet will be made from these assayed drugs or that the bottle that goes to the doctor will contain a preparation that is of fixed, known value, or a model, or something that corresponds to a standard of quality established by lawful authority.

It cannot be made too plain or emphasized too much that there is a difference between assaying and standardizing. A tincture of opium that contains $\frac{1}{2}$ of 1 per cent. of morphin might be an assayed tincture, but it is not a standardized tincture. If it contained $1\frac{1}{4}$ per cent. of morphin it would be a standardized tincture of opium.

A fluidextract of golden seal that contains 1 per cent. of the white alkaloid hydrastin might be an assayed fluidextract, but it is not a standardized fluidextract. It would have to contain 2 per cent. of the white alkaloid hydrastin to be a standardized fluidextract.

What is necessary to make an assayed preparation into a standardized preparation? Make it correspond with the legal standard—the U. S. P. standard and the claim on the bottle. Let us say, for example, that we have a percolate from coca leaves, and by assay we find that this percolate contains $\frac{1}{4}$ of 1 per cent. ether-soluble alkaloids. This is an assayed percolate, but to finish it to a standardized fluidextract we must concentrate it to half its volume or fortify it by passing

it through more crude drug so that there will be a higher proportion of alkaloid in the liquid. This standardizing process costs money. In the laboratory practice falling under the attention of the writer the following record has been noted.

"In placing in stock new lots of the following standardized preparations:

- Tr. Opium Deodorized
- F. E. Nux Vomica
- F. E. Hyoscyamus (Henbane)
- F. E. Belladonna Leaves
- F. E. Belladonna Root

we find that four of the five were below U. S. P. standard. This made it necessary to concentrate (reduce in volume) to bring them to the same uniformity and strength as our previous lots of these U. S. P. preparations. In doing this we reduced the volume about 45 pints. This quantity of these fluids has a selling value of about \$55.00. In other words, if these preparations had not been assayed, we would have had a larger output and hence a larger money value by about \$55.00. It must also be remembered that if these preparations were not standardized the physician would have to learn a new dose for each new lot and there would be great uncertainty as to the activity of the drug. If we must choose between these conditions, we prefer medicinal activity and uniformity to a large output of doubtful value.

Standardized fluids cannot compete from a price standpoint with non-standardized goods, but from an efficiency standpoint standardized fluids are alone. Standardized fluids against non-standardized fluids are cheapness against efficiency. The progressive physician will always choose efficiency, standardized goods.

Now then, any house might assay, usually they do not, but they might, but it takes a lot of undisputed integrity to standardize. The house must be willing to sacrifice a temporary money profit. To put actual value in the goods rather than a temporary profit on the ledger must be the purpose of the business. There will be a profit if the value is in the goods, but the value must be there first.

Size up your favorite drug houses and say which they will choose—value in the goods or loose coin in their pockets?

Here is another question every doctor should be interested in. Who fixes the strength of the preparations I use? Somebody does? Who does?

Somebody fixes the strength of all the medicine I use. Who does it?

Is my tincture of nux vomica controlled by the semi-civilized natives of British India when they collect the nux vomica seeds in the bush? Do the women and children of Persia when working in the poppy fields or the drug brokers at Constantinople in their opium cellars fix the strength of my tincture of opium? Do the farmers of England and the peasants of central Europe fix the strength of my preparations containing hyoscyamus and belladonna? Some of you may know the men who collect "yellow root" in Indiana, Kentucky, etc. Do they fix the strength of my preparations containing hydrastis?

Which do I want? Something guessed at by an East Indian native, a fellah of Asia Minor, a peasant in Europe, an American "herb and root digger," or a preparation assayed and standardized by a skilled pharmacist just before the preparation is bottled according to the requirements of the U. S. P. 8th Revision?

When the house from which a physician buys does not do its own assaying and standardizing somebody else does fix the strength of its products. Should more confidence be placed in a preparation where its quality is guessed at by the day laborer or in a preparation that has been analyzed with the help of instruments of precision, a balance, accurate measure and other delicate apparatus? Are pocket knives and meat saws or skilfully-made instruments used in surgical work?

Equipment, technical skill and, most of all, absolute honesty and integrity are required for the standardization of medicinal preparations. Each user of these articles should assure himself that his source of supply meets these requirements.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.

MUNCIE, IND.

(Continued from Page 260. Vol. III)

SURGEONS AND ASSISTANT SURGEONS WHO SERVED IN INDIANA REGIMENTS DURING THE CIVIL WAR.

On page 423, volume 2, of the JOURNAL, (October, 1909), I gave a list of surgeons and assistant surgeons who served in Indiana Regiments during the Civil War, simply giving names. I have decided to reproduce this list, and add the number of regiment in which each one served, with rank and service. A few mistakes which occurred in the printed list have been corrected,

so that the present one is nearly or quite correct. A number of names accidentally omitted in the former list are added to this.

ABBOTT, CHARLES H.—Asst. Surg., 36th Infantry.
 ABORN, ORIN—Asst. Surg., 40th Infantry.
 ADAMS, DAVID—Asst. Surg., 51st Infantry.
 ADAMS, JAMES R.—Asst. Surg., 58th Infantry; Surgeon, 15th Infantry.
 ADAMS, MARCELLUS M.—Asst. Surg., 116th Infantry.
 AICHELE, EMIL—Asst. Surg., 32nd Infantry.
 ALLEN, JOSEPH S.—Surgeon, 10th Infantry.
 ALLEN, WILLIAM S.—Asst. Surg., 143rd Infantry.
 ALEXANDER, JOHN H.—Asst. Surg., 27th Infantry.
 ANDERSON, JOSEPH V.—Asst. Surg., 15th Infantry.
 ANDERSON, WILLIAM—Surgeon, 37th Infantry.
 APPLGATE, CHARLES H.—Asst. Surg., 73rd Infantry.
 ARCHER, SAMUEL M.—Asst. Surg., 133d Infantry.
 ARMSTRONG, JAMES B.—Surgeon, 31st Infantry.
 ARNOLD, MARTIN B.—Asst. Surg., 135th Infantry.
 ARTHUR, CHRISTOPHER S.—Surgeon, 75th Infantry.
 AVERDICK, HENRY G.—Surgeon, 35th Infantry.
 AVERY, INCREASE J.—Surgeon, 10th Infantry.
 AVERY, JOHN P.—Asst. Surg., 11th Infantry.
 AUSTIN, THOMAS D.—Surgeon, 23rd Infantry.
 BABBITT, EDWARD D.—Asst. Surg., 34th Infantry.
 BAKER, BRAXTON—Asst. Surg., 130th Infantry.
 BALLARD, MICAJAH—Asst. Surg., 140th Infantry.
 BANKS, EPHRAIM N.—Surgeon, 54th Infantry.
 BARE, ADDISON W.—Asst. Surg., 82nd Infantry.
 BARE, JOHN R.—Surgeon, 66th Infantry.
 BARKER, WILLIAM L.—Surgeon, 120th Infantry.
 BASSETT, JOHN Q. A.—Asst. Surg., 74th Infantry.
 BAYSE, THOMAS S.—Surgeon, 36th Infantry.
 BEACHLEY, NATHANIEL J.—Asst. Surg., 22d Infantry.
 BECK, ELIAS W. II.—Surgeon, 3rd Cavalry.
 BECK, WILLIAM H.—Surgeon, 145th Infantry.
 BECKWITH, LOD W.—Surgeon, 38th Infantry.
 BEEBE, JAMES—Asst. Surg., 148th Infantry.
 BEEKS, GREEN C.—Surgeon, 150th Infantry.
 BELL, NATHANIEL G.—Asst. Surg., 35th Infantry.
 BENCE, ROBERT F.—Surgeon, 33rd Infantry.
 BENNETT, BASIL B.—Asst. Surg., 101st Infantry.
 BENSON, JULIUS L.—Asst. Surg., 7th Cavalry.
 BERRYMAN, JAMES A.—Asst. Surg., 135th Infantry.
 BIGELOW, JAMES K.—Surgeon, 8th Infantry.
 BIGNEY, PETER M.—Asst. Surg., 18th Infantry.
 BLACKWELL, JOHN A.—Surgeon, 115th Infantry.
 BLACKSTONE, JOHN K.—Asst. Surg., 9th Infantry.
 BLOUNT, RUFUS F.—Asst. Surg., 118th Infantry.
 BLASER, FELIX F.—Asst. Surg., 32nd Infantry.
 BLAIR, WILLIAM W.—Surgeon, 58th Infantry.
 BODMAN, ELAM—Asst. Surg., 30th Infantry.
 BOGART, HENRY J.—Asst. Surg., 139th Infantry.
 BOGLE, CHRISTOPHER F.—Asst. Surg., 43rd Infantry.
 BOOR, WILLIAM F.—Surgeon, 4th Cavalry.
 BOND, RICHARD C.—Surgeon, 15th Infantry.

BOUNELL, MATHEW H.—Surgeon, 116th Infantry.
 BOSWORTH, RICHARD—Asst. Surg., 36th Infantry.
 BOYNTON, CHARLES S.—Surgeon, 24th Infantry; Surgeon, 67th Infantry.
 BOYD, SAMUEL S.—Surgeon, 84th Infantry.
 BOYSE, THOMAS F.—Asst. Surg., 36th Infantry.
 BRACKETT, CHARLES—Asst. Surg., 1st Cavalry.
 BRAY, MADISON J.—Surgeon, 60th Infantry.
 BRAZELTON, JOHN B.—Asst. Surg., 134th Infantry.
 BREXTON, WILLIAM H.—Asst. Surg., 73rd Infantry.
 BROOKS, MORDECAI—Asst. Surg., 82nd Infantry.
 BROWN, JESSE R.—Asst. Surg., 57th Infantry.
 BROWN, JACOB R.—Asst. Surg., 29th Infantry.
 BROWNE, JOHN T.—Asst. Surg., 12th Cavalry.
 BROWN, S. CLAY—Asst. Surg., 8th Infantry; Surgeon, 18th Infantry.
 BROWN, WILKINS B.—Asst. Surg., 59th Infantry.
 BRUCE, GEORGE W.—Surgeon, 1st Cavalry; Asst. Surg., 8th Infantry; Surgeon, 142nd Infantry.
 BRUCKER, MAGNUS—Surgeon, 23rd Infantry.
 BRUSIE, LUTHER—Asst. Surg., 3rd Cavalry.
 BRYAN, GEORGE W.—Asst. Surg., 67th Infantry.
 BYERS, ALEXANDER R.—Surgeon, 65th Infantry.
 BRYSON, FRANK T.—Surgeon, 48th Infantry.
 BUCK, ROBERT H.—Surgeon, 13th Cavalry; Asst. Surg., 75th Infantry; Surgeon, 118th Infantry.
 BURTON, WILLIAM A.—Asst. Surg., 24th Infantry; Asst. Surg., 57th Infantry.
 BUSHNELL, SAMUEL B.—Asst. Surg., 11th Cavalry.
 BUTTERWORTH, WILLIAM W.—Surgeon, 99th Infantry.
 BUZETT, EDWARD F.—Surgeon, 49th Infantry.
 BYRN, SPENCER—Asst. Surg., 23rd Infantry.
 CALDERWOOD, JAMES C.—Asst. Surg., 23rd Infantry.
 CAMPBELL, JOHN C. L.—Asst. Surg., 21st Infantry.
 CAMPFIELD, JOHN A.—Asst. Surg., 12th Infantry.
 CARLEY, RUSH—Asst. Surg., 146th Infantry.
 CARR, GEORGE W.—Asst. Surg., 44th Infantry; Surgeon, 129th Infantry.
 CASTERLINE, AMOS B.—Asst. Surg., 52nd Infantry.
 CASTERLINE, ZIBA—Asst. Surg., 84th Infantry.
 CASSELBERRY, ISAAC—Surgeon, 1st Cavalry.
 CHAMBERLAIN, JAMES M.—Surgeon, 152nd Infantry.
 CHAMBERLAIN, N. A.—Surgeon, 13th Infantry.
 CHAMP, GEORGE W.—Asst. Surg., 139th Infantry.
 CHANDLER, JOSEPH A.—Asst. Surg., 155th Infantry.
 CHARLTON, ROBERT—Surgeon, 79th Infantry.
 CHARLTON, SAMUEL H.—Asst. Surg., 6th Infantry.
 CHITTENDEN, GEORGE F.—Surgeon, 16th Infantry.
 CHITWOOD, JOSHUA—Surgeon, 7th Cavalry.
 CLAPP, WILLIAM A.—Surgeon, 38th Infantry.
 CLIPPINGER, GEORGE W.—Surgeon, 14th Infantry.
 CLOWES, DAVID A.—Asst. Surg., 12th Cavalry.
 COLE, WILLIAM C.—Surgeon, 72nd Infantry.
 COLEMAN, ASA—Protom Asst. Surg., 46th Infantry.
 COLEMAN, HORACE—Surgeon, 46th Infantry.
 COLLETT, EDWARD T.—Asst. Surg., 6th Cavalry.
 COLLINGS, ISAAC S.—Asst. Surg., 57th Infantry; Surgeon, 57th Infantry.
 COLLINS, ERASMUS B.—Surgeon, 51st Infantry.
 COLLINS, GEORGE M.—Asst. Surg., 17th Infantry.

- COLLINS, WILLIAM A.—Asst. Surg., 6th Infantry.
COMINGOR, JOHN A.—Surgeon, 11th Infantry.
CONFER, JAMES M.—Surgeon, 29th Infantry.
CONN, ISAAC T.—Asst. Surg., 21st Infantry.
CONNETT, MAHLON C.—Asst. Surg., 8th Cavalry.
COOK, ROBERT H.—Asst. Surg., 12th Infantry.
COOPER, JOEL S.—Asst. Surg., 115th Infantry.
COX, JESSE T.—Asst. Surg., 89th Infantry.
CRAIG, ISAAC N.—Surgeon, 13th Infantry.
CRAIG, JOHN M.—Asst. Surg., 134th Infantry; Asst. Surg., 146th Infantry.
CRAVENS, JAMES W.—Asst. Surg., 1st Cavalry.
CRESAP, WILLIAM S.—Asst. Surg., 135th Infantry; Asst. Surg., 154th Infantry.
CROSBY, THOMAS H.—Asst. Surg., 47th Infantry.
CROUSE, HENRY M.—Surgeon, 57th Infantry.
CROWDER, ROBERT H.—Surgeon, 11th Cavalry.
CULBERTSON, DAVID P.—Asst. Surg., 43rd Infantry.
CULBERTSON, JOSEPH R.—Asst. Surg., 10th Cavalry.
CULBERTSON, ROBERT H.—Asst. Surg., 80th Infantry.
CULLEN, JOHN C.—Surgeon, 16th Infantry.
CURRY, JOHN—Surgeon, 38th Infantry.
CYRUS, WILLIAM H.—Asst. Surgeon, 54th Infantry.
DALY, GEORGE P.—Asst. Surg., 78th Infantry.
DARNELL, MILTON, B.—Asst. Surgeon, 43rd Infantry; Surgeon, 43rd Infantry.
DAUGHTERS, ANDREW P.—Surgeon, 18th Infantry.
DAVIS, JOHN B.—Asst. Surg., 21st Infantry.
DAVIS, JOHN W.—Asst. Surg., 6th Infantry; Asst. Surg., 24th Infantry.
DAVIS, JOSEPH H.—Asst. Surg., 145th Infantry.
DAVIS, ROBERT P.—Asst. Surg., 84th Infantry.
DAVIS, SAMUEL—Surgeon, 83rd Infantry.
DAVIS, SOLOMON—Surgeon, 10th Cavalry; Surgeon, 53rd Infantry.
DAVIDSON, BENJAMIN F.—Asst. Surg., 143rd Infantry.
DAVIDSON, WILLIAM—Asst. Surg., 76th Infantry.
DAVISSON, HENRY C.—Asst. Surg., 54th Infantry.
DEWEY, ANNIN W.—Surgeon, 101st Infantry.
DICKEN, JAMES L.—Surgeon, 47th Infantry.
DIXON, WILLIAM H.—Asst. Surg., 59th Infantry.
DOANE, GEORGE M.—Asst. Surg., 46th Infantry.
DODD, JAMES—Asst. Surg., 67th Infantry.
DODGE, HENRY C.—Asst. Surg., 74th Infantry.
DODSON, JONAS H.—Asst. Surg., 4th Cavalry.
DOME, DAVID C.—Asst. Surgeon, 17th Infantry.
DOWNEY, WILLIAM A.—Asst. Surg., 58th Infantry.
DUFFIELD, JAMES T.—Asst. Surg., 7th Infantry; Surgeon, 76th Infantry.
DUFFY, JOHN S.—Asst. Surg., 145th Infantry.
DUKATE, JOHN S.—Asst. Surg., 53rd Infantry.
DUNN, WILLIAMSON P.—Asst. Surg., 40th Infantry.
DUNN, WILLIAMSON D.—Asst. Surg., 21st Infantry, 1st Heavy Artillery.
DURAND, AMOS M.—Asst. Surg., 50th Infantry; Asst. Surg., 52nd Infantry.
DUTTON, DANIEL B.—Asst. Surg., 123rd Infantry.
EASTERLING, AMOS—Asst. Surg., 51st Infantry.
EBERSOLE, JACOB—Surgeon, 19th Infantry.
EDGERLE, GEORGE W.—Asst. Surg., 8th Infantry.
EDWINS, STANLEY W.—Asst. Surg., 124th Infantry.
ELIOTT, JAMES S.—Surgeon, 86th Infantry.
ELLIS, HAMILTON E.—Surgeon, 43rd Infantry.
ELSTON, WILLIAM T.—Asst. Surg., 151st Infantry.
ENO, NEWTON G.—Asst. Surg., 88th Infantry.
EVANS, DAVID S.—Surgeon, 69th Infantry.
EVERTS, ORPHEUS—Surgeon, 20th Infantry.
FERGUSON, WILLIAM T.—Asst. Surg., 142nd Infantry.
FIELD, NATHANIEL—Surgeon, 66th Infantry.
FISHER, ELIAS—Surgeon, 16th Infantry.
FITZGERALD, DAVID A.—Asst. Surg., 47th Infantry.
FITZGERALD, JENKINS A.—Asst. Surg., 70th Infantry.
FLACK, WILLIAM C.—Surgeon, 50th Infantry.
FLORER, THOMAS W.—Surgeon, 26th Infantry.
FORD, JAMES—Surgeon, 8th Infantry.
FORD, JOHN H.—Surgeon, 93rd Infantry.
FORSTMAYER, EMIL—Asst. Surg., 32nd Infantry.
FOSDICK, ALBERT C.—Surgeon, 5th Cavalry.
FOSTER, WILLIAM C.—Asst. Surg., 13th Infantry.
FOOTS, WILLIAM D.—Surgeon, 81st Infantry.
FRANCE, SAMUEL—Surgeon, 100th Infantry.
FREEMAN, SAMUEL A.—Asst. Surg., 30th Infantry.
FREEMAN, WILLIAM—Surgeon, 7th Cavalry; Asst. Surg., 52nd Infantry.
FRENCH, JOHN S.—Asst. Surg., 120th Infantry.
FRITTS, THOMAS J.—Asst. Surg., 3rd Cavalry; Asst. Surg., 8th Cavalry.
FRY, THOMAS W., Sr.—Surgeon, 11th Infantry.
FULLERTON, GEORGE W.—Asst. Surg., 136th Infantry.
GALL, ALOIS D.—Surgeon, 13th Infantry.
GARRETT, ANTHONY—Surgeon, 63rd Infantry.
GARRISON, HEROD D.—Asst. Surg., 4th Cavalry.
GARRISON, JAMES L. F.—Surgeon, 52nd Infantry.
GARVER, HENRY F.—Asst. Surg., 19th Infantry.
GARVER, JAMES A.—Asst. Surg., 8th Cavalry; Surgeon, 136th Infantry.
GATCH, JAMES D.—Asst. Surg., 16th Infantry.
GENTRY, ZACHARIAH B.—Surgeon, 154th Infantry.
GERRARD, JEROME B.—Asst. Surg., 35th Infantry; Asst. Surg., 117th Infantry.
GERRISH, JAMES W. F.—Surgeon, 67th Infantry.
GILLESPIE, WILLIAM—Asst. Surg., 7th Infantry; Surgeon, 83rd Infantry.
GILLUM, JAMES—Asst. Surg., 138th Infantry.
GILMORE, ALEXANDER W.—Asst. Surg., 9th Infantry.
GLICK, ELIAS B.—Surgeon, 40th Infantry.
GOLDSBERRY, JOHN A.—Asst. Surg., 21st Infantry.
GOODWIN, JOHN R.—Asst. Surg., 37th Infantry.
GORDON, GEORGE W.—Surgeon, 18th Infantry.
GORRELL, JOSEPH R.—Asst. Surg., 129th Infantry.
GOULD, VERNON—Asst. Surg., 87th Infantry.
GRAHAM, WILLIAM B.—Surgeon, 101st Infantry.
GRAY, ARTHUR W.—Surgeon, 24th Infantry.
GRAY, JOHN M.—Surgeon, 8th Cavalry.
GREGG, JAMES S.—Surgeon, 88th Infantry.
GREGG, VINCENT H.—Surgeon, 124th Infantry.
GREEN, HIRAM S.—Asst. Surg., 73rd Infantry.
GREEN, JOHN N.—Asst. Surg., 19th Infantry.
GRIFFITH, JOHN C.—Asst. Surg., 29th Infantry.

- GRINWELL, JOHN L.—Asst. Surg., 34th Infantry.
 GOSS, JAMES M.—Asst. Surg., 149th Infantry.
 GROVE, JASPER M.—Asst. Surg., 7th Cavalry.
 GROVER, HENRY C.—Asst. Surg., 20th Infantry.
 GUFFIN, JOHN—Asst. Surg., 20th Infantry; Surgeon, 56th.
 HAINES, ABRAM B.—Asst. Surg., 19th Infantry; Asst. Surg., 20th Infantry; Surgeon, 146th Infantry.
 HALL, DANIEL D.—Asst. Surg., 36th Infantry.
 HAM, LEVI J.—Surgeon, 48th Infantry.
 HARRIMAN, SIMEON B.—Asst. Surg., 34th Infantry.
 HARRIS, WILLIAM B.—Asst. Surg., 82nd Infantry.
 HARRISON, ROBERT G.—Asst. Surg., 120th Infantry.
 HARRISON, THOMAS H.—Asst. Surg., 150th Infantry.
 HAWN, EMANUEL R.—Asst. Surg., 21st Infantry, 1st Heavy Artillery; Surgeon, 49th Infantry; Surgeon, 144th Infantry.
 HAYMOND, WILLIAM S.—Asst. Surg., 46th Infantry.
 HAYES, SAMUEL M.—Asst. Surg., 30th Infantry.
 HEATON, JOHNSON F.—Asst. Surg., 29th Infantry.
 HELMER, ORLANDO H.—Asst. Surg., 43rd Infantry.
 HENDERSON, JOHN F.—Surgeon, 89th Infantry.
 HENDRICKS, WILLIAM C.—Surgeon, 31st Infantry; Surgeon, 147th Infantry.
 HENRY, ROBERT—Asst. Surg., 65th Infantry.
 HENRY, DAVID H.—Asst. Surg., 17th Infantry.
 HERVEY, JAMES W.—Asst. Surg., 50th Infantry.
 HERVEY, THOMAS P.—Asst. Surg., 50th Infantry.
 HIATT, CHRISTOPHER C.—Asst. Surg., 5th Cavalry; Surgeon, 6th Cavalry.
 HIGBEE, EDWARD S.—Surgeon, 74th Infantry.
 HIGINBOTHAM, SAMUEL—Surgeon, 87th Infantry.
 HILBURN, JABEZ C.—Surgeon, 97th Infantry.
 HITCHCOCK, JOHN W.—Surgeon, 18th Infantry; Surgeon, 133rd Infantry.
 HITT, JOHN Y.—Surgeon, 17th Infantry.
 HOAGLAND, JOHN S.—Asst. Surg., 53rd Infantry.
 HOUGHLAND, WILLIAM T.—Asst. Surg., 25th Infantry.
 HOBBS, WILLIAM P.—Asst. Surg., 85th Infantry.
 HOBBS, WILSON—Surgeon, 85th Infantry.
 HOCHSTETTER, JACOB P.—Surgeon, 57th Infantry.
 HODGKINS, LEWIS W.—Asst. Surg., 68th Infantry.
 HOFFMAN, MAX F. A.—Asst. Surg., 9th Infantry; Surgeon, 128th Infantry.
 HOLTZMAN, SAMUEL E.—Surgeon, 58th Infantry.
 HORN BROOK, WILLIAM P.—Asst. Surg., 42nd Infantry.
 HORNER, JACOB S.—Surgeon, 53rd Infantry.
 HOUSER, JACOB H.—Asst. Surg., 10th Cavalry.
 HOWARD, NOBLE P.—Asst. Surg., 12th Infantry.
 HUMPHREYS, LOUIS—Surgeon, 29th Infantry.
 HUNT, ANDREW M.—Asst. Surg., 33rd Infantry.
 HUNTER, JAMES B.—Surgeon, 60th Infantry.
 HURD, ANSON—Surgeon, 14th Infantry; Asst. Surg., 20th Infantry.
 HUTCHINSON, DAVID—Surgeon, 30th Infantry.
 IRELAND, WILLIAM H.—Asst. Surg., 22nd Infantry.
 IRWIN, GEORGE E.—Asst. Surg., 93rd Infantry.
 JAQUESS, GEORGE D.—Surgeon, 80th Infantry.
 JAY, JAMES C.—Asst. Surg., 7th Cavalry.
 JEANCON, JOHN ALLARD—Surgeon, 32nd Infantry.
 JESSUP, ROBERT B.—Surgeon, 24th Infantry.
 JOHNSON, ISAAC C.—Asst. Surg., 153rd Infantry.
 JOHNSON, JARVIS J.—Surgeon, 27th Infantry.
 JOHNSON, JOHN B.—Asst. Surg., 72nd Infantry.
 JOHNSON, SAMUEL F.—Surgeon, 65th Infantry.
 JOHNSON, THOMAS J.—Asst. Surg., 25th Infantry.
 JOHNSON, WILLIAM W.—Asst. Surg., 85th Infantry.
 JONES, CALEB V.—Surgeon, 63rd Infantry.
 JONES, GEORGE W.—Asst. Surg., 63rd Infantry.
 JONES, HARRY—Asst. Surg., 57th Infantry.
 JONES, JAMES T.—Asst. Surg., 132nd Infantry.
 JONES, JOHN H.—Asst. Surg., 13th Cavalry.
 JONES, JOSEPH—Surgeon, 86th Infantry.
 JONES, THOMAS N.—Asst. Surg., 2nd Cavalry; Surgeon, 130th Infantry.
 JONES, WILLIAM B.—Surgeon, 149th Infantry.
 JOSSE, JOHN M.—Surgeon, 32nd Infantry; Asst. Surg., 74th Infantry.
 KAY, ROBERT—Asst. Surg., 23rd Infantry; Asst. Surg., 144th Infantry.
 KAY, DAVID G.—Surgeon, 81st Infantry.
 KEEN, LORENZO S.—Surgeon, 29th Infantry.
 KEISER, ALFRED—Asst. Surg., 124th Infantry.
 KELLY, MATHEW—Asst. Surg., 82nd Infantry.
 KELSO, WILLIAM H.—Asst. Surg., 81st Infantry.
 KEMPER, GENERAL W. H.—Asst. Surg., 17th Infantry.
 KENDRICK, WILLIAM H.—Asst. Surg., 19th Infantry.
 KENNEDY, HAMLET K.—Asst. Surg., 13th Infantry.
 KENNEDY, LEROY H.—Asst. Surg., 70th Infantry.
 KERSEY, SILAS H.—Asst. Surg., 36th Infantry; Surgeon, 36th Infantry.
 KILGORE, TECUMSEH—Asst. Surg., 84th Infantry; Asst. Surg., 13th Cavalry; Surgeon, 13th Cavalry.
 KILLEN, JAMES—Asst. Surg., 10th Infantry.
 KIMBALL, ABNER D.—Asst. Surg., 48th Infantry.
 KING, HENRY R.—Asst. Surg., 51st Infantry; Surgeon, 147th Infantry.
 KING, WILLIAM F.—Asst. Surg., 124th Infantry.
 KIRBY, HENRY—Surgeon, 84th Infantry.
 KIRKPATRICK, GEORGE W.—Asst. Surg., 72nd Infantry.
 KNIGHT, JAMES H.—Asst. Surg., 3rd Cavalry.
 KRAUTH, FERDINAND—Surgeon, 32nd Infantry.
 KUESTER, CHARLES E.—Asst. Surg., 133rd Infantry; Surgeon, 156th Infantry.
 KUNKLER, GUSTAVE A.—Surgeon, 32nd Infantry.
 LAMBEY, LOUIS—Asst. Surg., 14th Infantry.
 LANSING, SYLVESTER—Asst. Surg., 48th Infantry; Asst. Surg., 49th U. S. C. T.
 LARKIN, JOHN B.—Asst. Surg., 17th Infantry; Surgeon, 17th Infantry.
 LATTIMORE, FINLEY C.—Asst. Surg., 6th Infantry.
 LEAVITT, PHILANDER C.—Surgeon, 100th Infantry.
 LEECH, ELLIOTT W.—Asst. Surg., 123rd Infantry.
 LEEDY, JOHN K.—Surgeon, 74th Infantry.
 LEMON, WILLIAM H.—Surgeon, 82nd Infantry.
 LENT, CYRUS V. N.—Surgeon, 101st Infantry; Surgeon, 138th Infantry.
 LEWIS, ELI—Surgeon, 65th Infantry.
 LEWIS, SAMUEL B.—Surgeon, 10th Cavalry.
 LIDDALL, JAMES P.—Asst. Surg., 22nd Infantry.

- LININGER, DANIEL P.—Asst. Surg., 7th Infantry.
 LOMAX, WILLIAM—Surgeon, 12th Infantry.
- McCARTHY, JOHN F.—Surgeon, 29th Infantry.
 McCHRISTIE, JOHN—Asst. Surg., 9th Cavalry.
 McCLELLAND, JAMES S.—Surgeon, 135th Infantry.
 McClURE, SAMUEL M.—Asst. Surg., 37th Infantry.
 McCoy, GEORGE K.—Asst. Surg., 35th Infantry.
 McCoy, JAMES A. C.—Asst. Surg., 49th Infantry.
 McCoy, JOHN—Surgeon, 139th Infantry.
 McCREA, THOMAS P.—Surgeon, 10th Infantry.
 McCUNE, GEORGE W.—Surgeon, 14th Infantry.
 McFADDEN, WILLIAM G.—Surgeon, 79th Infantry.
 McGEE, RICHARD—Asst. Surg., 100th Infantry.
 McKINNEY, ASA W.—Surgeon, 31st Infantry.
 McNUTT, JAMES H.—Asst. Surg., 97th Infantry.
 McPHEETERS, JOHN S.—Surgeon, 23rd Infantry.
 McPHEETERS, JOSEPH G.—Surgeon, 14th Infantry;
 Surgeon, 33rd Infantry.
- MAGANN, EDWIN W.—Asst. Surg., 9th Cavalry.
 MAGENISS, JOHN—Asst. Surg., 42nd Infantry.
 MANKER, LEWIS—Surgeon, 79th Infantry.
 MARTIN, JAMES W.—Surgeon, 52nd Infantry.
 MARTIN, SAMUEL F.—Asst. Surg., 65th Infantry.
 MARTIN, WILLIAM H.—Surgeon, 10th Infantry.
 MARTIN, W. W.—Surgeon, 44th Infantry.
 MASON, FERDINAND—Surgeon, 13th Infantry.
 MEEK, JOHN A.—Asst. Surg., 89th Infantry.
 MEEKER, DANIEL—Surgeon, 9th Infantry.
 MEEKER, LYSANDER—Asst. Surg., 128th Infantry.
 MELSCHMEIER, CHARLES T.—Asst. Surg., 101st Infantry.
- MENDENHALL, WILLIAM T.—Asst. Surg., 57th Infantry.
- MERCER, WILLIAM M.—Asst. Surg., 152nd Infantry.
- MEREDITH, MARION—Asst. Surg., 68th Infantry.
 MERIT, NATHANIEL P.—Asst. Surg., 31st Infantry.
 MESSNER, SAMUEL F.—Asst. Surg., 116th Infantry.
 MILNER, ISAAC N.—Asst. Surg., 53rd Infantry.
 MILLER, JAMES—Asst. Surg., 30th Infantry.
 MILLS, JAMES R.—Asst. Surg., 47th Infantry.
 MITCHELL, ROBERT—Asst. Surg., 38th Infantry.
 MITCHELL, ELISHA V.—Surgeon, 91st Infantry.
 MITCHELL, ROBERT S.—Asst. Surg., 57th Infantry.
 MOFFITT, JOHN—Asst. Surg., 33rd Infantry.
 MONROE, JASPER R.—Surgeon, 49th Infantry.
 MONTEITH, JACOB S.—Asst. Surg., 69th Infantry.
 MONTGOMERY, GEORGE B.—Surgeon, 24th Infantry.
 MORGAN, JAMES W.—Asst. Surg., 31st Infantry.
 MORROW, DOCTOR F.—Asst. Surg., 13th Cavalry.
 MORROW, JAMES L.—Surgeon, 72nd Infantry.
 MOSS, GORDON, A.—Asst. Surg., 87th Infantry; Surgeon, 151st Infantry.
 MOSS, GORDON D.—Asst. Surg., 87th Infantry; Surgeon, 150th Infantry.
 MULLEN, ALEXANDER J.—Surgeon, 35th Infantry.
 NULLINIX, MASTON G.—Asst. Surg., 149th Infantry.
 MUNFORD, SAMUEL E.—Asst. Surg., 17th Infantry; Surgeon, 17th Infantry.
- MURPHY, ALEXANDER D.—Asst. Surg., 97th Infantry.
- MURPHY, ALEXANDER M.—Asst. Surg., 97th Infantry; Surgeon, 97th Infantry.
- MURRAY, RALPH V.—Asst. Surg., 137th Infantry.
 MYERS, SETH F.—Surgeon, 73rd Infantry.
 MYERS, WILLIAM D.—Surgeon, 88th Infantry.
 MYERS, WILLIAM H.—Asst. Surg., 10th Infantry; Surgeon, 30th Infantry.
- NEAT, THOMAS C.—Asst. Surg., 144th Infantry.
 NEELY, JOHN M.—Surgeon, 120th Infantry.
 NELSON, WILLIAM Y.—Asst. Surg., 128th Infantry.
 NEW, GEORGE W.—Surgeon, 7th Infantry.
 NEWLAND, BENJAMIN—Surgeon, 22nd Infantry.
 NICHOLS, JOHN D.—Asst. Surg., 38th Infantry.
 O'FERRELL, ROBERT M.—Surgeon, 40th Infantry.
 OLDS, JOSEPH H.—Asst. Surg., 6th Cavalry.
 O'NEAL, LAUGHLIN—Surgeon, 153rd Infantry.
 ORR, JAMES P.—Asst. Surg., 36th Infantry.
 OSGOOD, HOWARD G.—Asst. Surg., 5th Cavalry.
 PATTERSON, JOHN J.—Asst. Surg., 1st Cavalry.
 PATTON, JAMES C.—Asst. Surg., 1st Cavalry; Asst. Surg., 58th Infantry.
- PATTISON, GEORGE W.—Surgeon, 130th Infantry.
 PARKS, EDWARD R.—Surgeon, 30th Infantry.
 PARSONS, GEORGE W.—Asst. Surg., 35th Infantry.
 PEARMAN, FRANCIS M.—Surgeon, 30th Infantry.
 PEARCE, JOHN W.—Asst. Surg., 51st Infantry.
 PEARSON, CHARLES D.—Surgeon, 49th Infantry; Surgeon, 82nd Infantry.
- PECK, SAMUEL W.—Surgeon, 18th Infantry.
 PERKINS, CONRAD S.—Asst. Surg., 10th Infantry.
 PHIPPS, JOHN M.—Surgeon, 132nd Infantry.
 PIATT, WILLIAM C.—Asst. Surg., 140th Infantry.
 PICKTHALL, ARTHUR—Asst. Surg., 49th Infantry.
 PITCHER, STEWART C.—Surgeon, 143rd Infantry.
 PLUMMER, ISAAC N.—Asst. Surg., 44th Infantry.
 POFFENBERGER, ISAIAH—Asst. Surg., 99th Infantry.
- POPE, HENRY E.—Asst. Surg., 54th Infantry.
 PORTER, JOHN P.—Asst. Surg., 89th Infantry.
 POTTENGER, WILSON—Asst. Surg., 73rd Infantry.
 POTTS, JOHN—Asst. Surg., 40th Infantry.
 PRATT, SAMUEL R.—Surgeon, 12th Cavalry; Surgeon, 87th Infantry.
- PRESTON, ALBERT G.—Surgeon, 55th Infantry.
 PRICHET, JOHN—Surgeon, 57th Infantry.
 PRUNK, DANIEL H.—Asst. Surg., 20th Infantry.
 RALSTON, WILLIAM G.—Surgeon, 81st Infantry.
 READ, EZRA—Surgeon, 11th Cavalry; Surgeon, 21st Infantry, 1st Heavy Artillery.
- REED, ALBERT S.—Asst. Surg., 147th Infantry.
 REAGAN, AMOS W.—Asst. Surg., 70th Infantry.
 REAGAN, JESSE—Surgeon, 148th Infantry.
 RERICK, JOHN H.—Surgeon, 44th Infantry.
 RICHARDS, SAMUEL D.—Surgeon, 59th Infantry.
 RICHARDSON, ADAMSON G.—Asst. Surg., 154th Infantry.
- RIFFLE, JOHN S.—Asst. Surg., 40th Infantry.
 RITTER, JOHN A.—Surgeon, 49th Infantry.
 ROBINSON, JOHN A.—Asst. Surg., 11th Cavalry.
 ROBINSON, LAWSON D.—Asst. Surg., 99th Infantry.
 ROBSON, JOHN R.—Asst. Surg., 1st Cavalry; Asst. Surg., 91st Infantry.
- ROBSON, ROBERT—Surgeon, 91st Infantry.
 ROCKWELL, WILLIAM—Asst. Surg., 11th Infantry.
 ROE, JOHN L.—Surgeon, 137th Infantry.

- ROETHIER, DANIEL B.—Asst. Surg., 7th Cavalry.
 ROGERS, DUDLEY—Surgeon, 59th Infantry.
 ROOKER, JAMES I.—Asst. Surg., 11th Infantry.
 ROSE, MADISON H.—Surgeon, 53rd Infantry.
 RUSSELL, GEORGE H.—Asst. Surg., 5th Cavalry.
 RUTER, RINALDO R.—Surgeon, 93rd Infantry.
 RUTLEDGE, WILLIAM—Asst. Surg., 2nd Cavalry.
 RYAN, TOWNSEND—Surgeon, 54th Infantry.
- SABIN, ELIAS H.—Asst. Surg., 14th Infantry.
 SADLER, JOSEPH J.—Asst. Surg., 16th Infantry.
 SALISBURY, DAVID—Asst. Surg., 128th Infantry.
 SCEARCE, JOHN C.—Asst. Surg., 11th Infantry.
 SCHELL, FREDERICK A.—Asst. Surg., 6th Cavalry.
 SCHMIDT, GUSTAVUS A.—Asst. Surg., 6th Cavalry.
 SCHUSSLER, CHARLES—Surgeon, 6th Infantry.
 SCOTT, WILLIAM—Surgeon, 89th Infantry.
 SCOTT, WILLIAM G.—Asst. Surg., 8th Cavalry.
 SCUDDER, JOHN A.—Asst. Surg., 65th Infantry.
 SEXTON, MARSHALL—Surgeon, 52nd Infantry.
 SHAEFFER, ABNER H.—Surgeon, 75th Infantry.
 SHAPLEY, WILLIAM W.—Surgeon, 42nd Infantry.
 SHELTON, GEORGE W.—Surgeon, 74th Infantry.
 SHERMAN, MASON G.—Surgeon, 9th Infantry.
 SHERROD, WILLIAM F.—Surgeon, 21st Infantry.
 SHERWIN, HERMAN H.—Asst. Surg., 152nd Infantry.
 SHORT, WESLEY—Asst. Surg., 26th Infantry.
 SIMMS, JOHN M.—Asst. Surg., 76th Infantry.
 SIMONSON, JAMES C.—Surgeon, 66th Infantry.
 SLAUGHTER, ROBERT C.—Asst. Surg., 25th Infantry; Surgeon, 53rd Infantry.
 SLAUGHTER, WILLIAM W.—Surgeon, 60th Infantry.
 SLAVENS, ZENAS L.—Asst. Surg., 115th Infantry.
 SMITH, ANDREW J.—Asst. Surg., 2nd Cavalry.
 SMITH, JOHN W.—Surgeon, 155th Infantry.
 SMITH, WILLIAM R.—Asst. Surg., 70th Infantry.
 SMITH, WILLIAM Z.—Asst. Surg., 49th Infantry.
 SMYDTH, WILLIAM C.—Surgeon, 43rd Infantry.
 SMYTHE, GONSOLVO C.—Surgeon, 43rd Infantry.
 SPAIN, ARCHIBALD W.—Asst. Surg., 80th Infantry; Asst. Surg., 136th Infantry.
 SPARKS, NATHAN B.—Asst. Surg., 6th Infantry.
 SPENCER, ROBERT—Surgeon, 73rd Infantry.
 SPENCER, WILLIAM—Asst. Surg., 46th Infantry; Asst. Surg., 73rd Infantry.
 SPOTTSWOOD, EDMUND T.—Surgeon, 6th Cavalry.
 SPURRIER, JOHN H.—Asst. Surg., 16th Infantry; Surgeon, 123rd Infantry.
 SQUIRE, WILLIAM B.—Asst. Surg., 14th Infantry.
 ST. CLAIR, OWEN—Asst. Surg., 142nd Infantry.
 STEARNS, ELIAS P.—Asst. Surg., 72nd Infantry.
 STEWART, WILLIAM J.—Asst. Surg., 47th Infantry.
 STILLWELL, JOSEPH A.—Surgeon, 22nd Infantry.
 STUKEY, JOHN M.—Asst. Surg., 59th Infantry.
 SWAFFORD, BENJAMIN F.—Surgeon, 11th Cavalry.
 SWARTZ, DAVID J.—Asst. Surg., 100th Infantry.
 SWEENEY, THOMAS J.—Asst. Surg., 43rd Infantry.
 SWEETZ, WILLIAM C.—Surgeon, 140th Infantry.
- TAGGART, JOHN F.—Surgeon, 4th Cavalry.
 TAYLOR, ALFRED B.—Asst. Surg., 12th Infantry.
 TAYLOR, DANIEL W.—Surgeon, 34th Infantry.
 TAYLOR, WILLIAM D.—Surgeon, 42nd Infantry.
 TEAL, NORMAN—Asst. Surg., 88th Infantry.
- TILFORD, JOHN H.—Asst. Surg., 79th Infantry.
 TILMAN, JONATHAN R.—Asst. Surg., 60th Infantry.
 TILLSON, HOSEA—Asst. Surg. and Surgeon, 57th Infantry.
 THOMAS, CHARLES L.—Surgeon, 25th Infantry.
 THOMAS, ELIAS B.—Asst. Surg., 4th Cavalry.
 THOMAS, JAMES H.—Asst. Surg., 117th Infantry.
 THOMAS, JOHN H.—Asst. Surg., 49th Infantry.
 THOMPSON, JOHN C.—Surgeon, 11th Infantry.
 TODD, ROBERT N.—Surgeon, 26th Infantry.
 TODD, WILLIAM A.—Asst. Surg., 11th Infantry.
 TOLERTON, JAMES—Surgeon, 129th Infantry.
 TORBET, GEORGE A.—Asst. Surg., 26th Infantry.
 TRIPLETT, CHARLES E.—Surgeon, 87th Infantry.
 TWIFORD, WILLIS H.—Surgeon, 27th Infantry.
 TYNER, SAMUEL L.—Asst. Surg., 42nd Infantry.
- UNDERHILL, JOSHUA W.—Surgeon, 46th Infantry.
- VAILE, JOEL—Surgeon, 2nd Cavalry.
 VAN VORIS, FLAVIUS J.—Asst. Surg., 86th Infantry.
 VINCENT, HENRY C.—Asst. Surg., 83rd Infantry.
 VINCENT, JEREMIAH K.—Asst. Surg., 33rd Infantry.
 VOYLES, DAVID W.—Surgeon, 66th Infantry.
- WALKER, AUGUSTUS C.—Asst. Surg., 63rd Infantry.
 WALKER, JOHN T.—Surgeon, 25th Infantry.
 WALLACE, JAMES P.—Asst. Surg., 150th Infantry.
 WALTON, ALLEN M.—Surgeon, 13th Cavalry; Asst. Surg., 86th Infantry.
 WASHBURN, ISRAEL B.—Surgeon, 46th Infantry.
 WATERMAN, LUTHER D.—Surgeon, 8th Cavalry.
 WEAVER, SAMUEL M.—Asst. Surg., 83rd Infantry.
 WEBB, WILLIAM A.—Asst. Surg., 70th Infantry.
 WEDDINGTON, SAMUEL C.—Asst. Surg., 147th Infantry.
 WEIR, ANDREW N.—Surgeon, 6th Cavalry.
 WELBORN, WILLIAM P.—Surgeon, 80th Infantry.
 WELMAN, RICHMOND M.—Surgeon, 9th Cavalry.
 WELLS, JAMES C.—Asst. Surg., 50th Infantry.
 WHITESELL, JOSEPH M.—Asst. Surg., 36th Infantry.
- WILTAKER, ELI D.—Surgeon, 38th Infantry.
 WHITE, ARTHUR—Asst. Surg., 25th Infantry.
 WHITE, JACOB S.—Surgeon, 34th Infantry.
 WHITE, JAMES B.—Asst. Surg., 75th Infantry.
 WHITE, JOHN M.—Asst. Surg., 70th Infantry.
 WHITEHALL, ALEXANDER L.—Asst. Surg., 60th.
 WHITESELL, PHILIP P.—Surgeon, 101st Infantry.
 WIDMER, JOHN F. B.—Asst. Surg., 49th Infantry.
 WILES, WILLIAM V.—Asst. Surg., 85th Infantry.
 WILLIAMSON, ELEAZER—Asst. Surg., 130th Infantry.
- WILLIAMSON, ROBERT A.—Surgeon, 10th Infantry.
 WILLIAMSON, THOMAS W. C.—Asst. Surg., 24th Infantry.
- WILSON, ISAAC—Asst. Surg., 137th Infantry.
 WILSON, JACOB B.—Asst. Surg., 123rd Infantry.
 WILSON, JAMES—Asst. Surg., 11th Infantry.
 WINANS, RICHARD—Asst. Surg., 17th Infantry.
 WISHARD, JOSEPH M.—Surgeon, 5th Cavalry.
 WITT, WILLIAM B.—Surgeon, 69th Infantry.
 WOLF, HARVEY S.—Surgeon, 81st Infantry.
 WONSETLER, GIDEON—Asst. Surg., 15th Infantry.
 WOOD, JAMES A.—Asst. Surg., 12th Cavalry.

WOODEN, JOHN L.—Surgeon, 68th Infantry.
 WOODS, CALVIN J.—Surgeon, 19th Infantry.
 WOODS, DANIEL L.—Asst. Surg., 21st Infantry, 1st Heavy Artillery; Asst. Surg., 138th Infantry; Asst. Surg., 153rd Infantry.
 WOOLEN, GREEN V.—Asst. Surg., 27th Infantry.
 WRIGHT, IVY E.—Asst. Surg., 116th Infantry.
 YOUART, JOHN M.—Asst. Surg., 15th Infantry; Surgeon, 15th Infantry.

SURGEONS IN COLORED REGIMENTS.

EASTMAN, JOSEPH—Asst. Surg., 44th U. S. C. T.
 STRONG, JOHN T.—Surgeon, 44th U. S. C. T.
 WEIST, JACOB R.—Surgeon, 1st U. S. C. T.
 THOMPSON, JAMES L.—Surgeon, 4th U. S. Heavy Artillery.

SURGEONS IN MINUTE MEN REGIMENTS.

"Late on the evening of July 8, 1863, intelligence was received at Indianapolis, that a rebel force, estimated to be six thousand cavalry, with four pieces of artillery, under command of Gen. John H. Morgan, had crossed the Ohio river near Mauckport, and was moving on Corydon, Ind. Governor Morton at once issued a patriotic call upon the citizens of the State, to leave their various occupations and organize for defense. Under this call, within the short space of forty-eight hours, sixty-five thousand men had tendered their services. Of this force, thirteen regiments and one battalion were organized specially for this emergency, and the regiments designated numerically, from One Hundred and Second to One Hundred and Fourteenth, inclusive, the battalion being assigned to the One Hundred and Seventh Regiment."—Report of Adjutant General of Indiana, Vol. iii, p. 189.

The usual number of surgeons were not supplied to these regiments. They were in the service but a few days.

BOUNELL, MATHEW H.—Surgeon, 102nd Regiment.
 HARRISON, THOMAS H.—Asst. Surg., 102nd Regiment.
 SPANN, BENJAMIN F.—Asst. Surg., 102nd Regiment.
 BUCK, ROBERT H.—Surgeon, 103rd Regiment.
 THOMAS, L. C.—Surgeon, 104th Regiment.
 McCLAIN, JAMES—Asst. Surg., 104th Regiment.
 WHEELDON, JOHN—Asst. Surg., 104th Regiment.
 SPURRIER, JOHN H.—Surgeon, 105th Regiment.
 KELLOG, NORMAN P.—Asst. Surg., 105th Regiment.
 CHITWOOD, JOSHUA—Asst. Surg., 106th Regiment.
 PARVIN, THEOPHILUS—Surgeon, 107th Regiment.
 CONSTANT, JOHN H.—Surgeon, 108th Regiment.
 MOORE, ANDERSON M.—Asst. Surg., 108th Regiment.
 MAY, WILLIS L.—Asst. Surg., 108th Regiment.
 JOHNSON, JARVIS J.—Surgeon, 109th Regiment.
 HALL, DANIEL D.—Surgeon, 111th Regiment.
 BEARD, FERDINAND W.—Surgeon, 112th Regiment.
 BARE, ADDISON W.—Asst. Surg., 112th Regiment.
 PARMERLEE, H. M.—Surgeon, 113th Regiment.
 WOOD, MEREDITH—Asst. Surg., 113th Regiment.

NOTE.—No medical officers were supplied to the 110th and 114th regiments.

SPANISH-AMERICAN WAR.

Indiana equipped and sent out five regiments for this war; and furnished them with five regimental

surgeons, eleven regimental assistant surgeons, three surgeons in the volunteer army appointed by the President, and fifteen hospital stewards, making a total of thirty four medical officers. An alphabetical list of their names is given:

BARCUS, PAUL J.—Asst. Surg., 158th Regiment, Indiana Infantry.
 BARNETT, CHARLES E.—Asst. Surg., 157th Regiment, Indiana Infantry.
 BARNETT, WALTER W.—Surgeon, 157th Regiment, Indiana Infantry.
 BUEHLER, EUGENE—Asst. Surg., 160th Regiment, Indiana Infantry.
 CHARLTON, FRED R.—Surgeon, 158th Regiment, Indiana Infantry.
 DAVIS, WILLIAM S.—Asst. Surg., 159th Regiment, Indiana Infantry.
 FOXWORTHY, FRANK W.—Asst. Surg., 160th Regiment, Indiana Infantry.
 *GARSTANG, REGINALD W.—Asst. Surg., 157th Regiment, Indiana Infantry.
 GERRISH, MILLARD F.—Asst. Surg., 161st Regiment, Indiana Infantry.
 HAWKINS, EUGENE—Asst. Surg., 159th Regiment, Indiana Infantry.
 JONES, HOMER I.—Asst. Surg., 158th Regiment, Indiana Infantry.
 KYLE, JOHN J.—Surgeon, 160th Regiment, Indiana Infantry.
 SIVER, EMMETT L.—Surgeon, 157th Regiment, Indiana Infantry.
 *SMITH, WICLIFFE—Surgeon, 161st Regiment, Indiana Infantry.
 STUNKARD, THOMAS C.—Surgeon, 159th Regiment, Indiana Infantry.
 WILSON, JAMES—Asst. Surg., 161st Regiment, Indiana Infantry.
 * Deceased.

LIST OF SURGEONS APPOINTED BY THE PRESIDENT IN THE VOLUNTEER ARMY OF THE UNITED STATES.

ENGLISH, CALVIN H.—Major and Brigade Surgeon.
 KIMBALL, THOMAS C.—Major and Chief Surgeon.
 PEYTON, DAVID C.—Major and Brigade Surgeon.

HOSPITAL STEWARDS.

ESPEY, JAMES G.—161st Regiment, Indiana Infantry.
 HAWKINS, ROBERT W.—159th Regiment, Indiana Infantry.
 LANGDON, HARRY K.—159th Regiment, Indiana Infantry.
 LEWIS, JOHN I.—161st Regiment, Indiana Infantry.
 MOORE, HARRY S.—158th Regiment, Indiana Infantry.
 MOORE, HARVEY A.—157th Regiment, Indiana Infantry.
 NEWLAND, HARROD C.—158th Regiment, Indiana Infantry.
 PFAFF, JOHN A.—160th Regiment, Indiana Infantry.
 RATHERT, WILLIAM H.—161st Regiment, Indiana Infantry.
 SCHULTZ, GUY A.—157th Regiment, Indiana Infantry.
 SHELL, OGDEN G.—157th Regiment, Indiana Infantry.

SOMMER, EDGAR L.—160th Regiment, Indiana Infantry.

STARRETT, WALTER K.—160th Regiment, Indiana Infantry.

TOWNSEND, TERRY M.—159th Regiment, Indiana Infantry.

WRIGHT, CHARLES E.—158th Regiment, Indiana Infantry.

A CASE OF PELLAGRA IN INDIANA.

GEORGE D. MARSHALL, M.D.

KOKOMO, IND.

This patient was under my care a short time during the spring of 1908, when she seemed to be suffering from a malarial cachexia. She improved under treatment with iron, arsenic and quinin, feeling fairly well in August of that year.

I did not see her again until June 12, 1910, when she again came under my care. She has a dejected, sorrowful look, the eyes appear rather prominent. This, however, is due largely to the color of the skin about them.

There is an erythematous patch on the backs of the hands, extending half way down the fingers and about four inches above the wrists. The skin is a rose pink color with cracks and fissures in it that bleed at times. At the upper border of the patches there is a border of dirty-looking brown scales. Scales form over the patches and leave the skin thin and dry, as though it would crinkle if pinched or rubbed. There are patches on either side of the neck extending up almost to the ears and meeting behind the neck.



Figure 1.

There are patches on either side of the nose, extending onto the eyelids and patches the size of a fifty-cent piece on either temple, on a level with the brow. These patches are brown and the skin is scaly and cracked. The lesions are exactly the same on either side. The lips are thickened, brown and crack and bleed when the patient smiles.

There are brown streaks of pigmented skin across the chest.

The patient gives a history of an eruption of the same kind in the spring and early summer of 1909.

There had been a rash on the tops of the feet and legs, but this had disappeared before I saw her, leaving the skin rather tight over the bones.

The patient complains of burning and itching sensations in the affected areas and of numbness in the extremities. She complains of headaches and gets so dizzy she can hardly stand at times.



Figure 2.

She complains of feeling stiff and has pain in the joints, and an inability to raise her feet over the rugs or other light obstacles, and also has a sense of constriction about the abdomen. The gait is noticeably ataxic. She is forgetful and gets lost at times, not knowing where she is. Her husband notices a change in disposition, she does not sleep well at night and had night sweats about three nights of the week. She has the headache and feels numb at times, this being most marked in the extremities; the hands and feet lose almost all feeling at times.

She has had about four liquid stools a day for the past few years. Her mouth and tongue have been sore and there are red patches on the buccal surfaces.

She complains of pain in the long bones and feels so distressed that she cannot describe it. Her temperature has been normal most of the time; pulse about 100; respiration, 20. The pupils react rather sluggishly to light and accommodation. Patellar reflexes are exaggerated. Hemoglobin, 70 per cent.; no plasmodia in the blood, but there seems to be an increase of white cells, although no blood count was made. Urine sp. gr., 1010; reaction neutral; albumin 0; sugar 0. No casts. She complains of cystitis. During June and July of 1909 she had a metrorrhagia lasting about eight weeks. This recurred during April of this year. The skin lesions improved under the application of an ointment con-

taining resorcin, bismuth subgallate, zinc oxid and salicylic acid.

The general condition has improved some under treatment with iron, arsenic and quinin and an alkaline digestive. Moderate doses of sodium bromid control the nervous symptoms so the patient can get some rest. This patient has never eaten corn products in great amounts, as corn did not seem to agree with her, although she had consumed some fried mush. She has always been a great fruit eater, mostly bananas and oranges, and a very scant meat eater. Has used very little milk and eggs.

While the predisposing factor of corn seems to be absent in this case, as she has not used corn as a food to any extent, she said corn always made her feel badly after eating it. The symptoms and skin lesions are so typical in this case there can be no doubt of the diagnosis, and it would appear that corn could hardly be the cause of the disease in this case.

The hygienic conditions of her home are good, as she has always been a very neat house-keeper and a good cook. In connection with this disease, I would mention that the corn in this part of the state has been bad the last four years. Ears that looked solid on the outside, were mouldy at the root of the grain and often produced sickness in hogs, resembling hog cholera in some ways, but apparently lacking in contagion.

Since submitting the report on this case I have added to the treatment of giving sodium nitrite in 2 gr. doses three times a day and it gave immediate relief from the dyspnea, permitting the patient to lie down and sleep comfortably all night, and also had a very beneficial effect on the skin lesions.

I have seen no reports where this drug has been used in the treatment of this disease, but it has appeared to give fine results in this case.

THE CONQUEST OF DISEASE THROUGH ANIMAL EXPERIMENTATION. By James Peter Warbasse, M.D., New York and London. D. Appleton & Company, 1910.

At a time when so much is appearing in current literature upon the subject of the so-called "Antivivisection Crusade," it is particularly fitting that a small volume setting forth clearly the subject of animal experimentation should come from the pen of a medical man.

Dr. Warbasse's book is based upon addresses on this subject given by him before various medical and scientific societies, amplified and correlated so as to form a treatise which undoubtedly will be of great service in correcting the erroneous conceptions of this very important field of scientific work.

The small volume will furnish a profitable hour's reading to physician and layman alike.

THE STEREO-CLINIC. By Dr. Howard A. Kelly. In nine sections at present completed, with many others to follow. Sec. VIII. Dr. J. A. Bodine's Operation for Inguinal Hernia under Local Analgesia. 47 stereos. 67 pages. Buckram. The Southworth Company, Troy, N. Y., Publishers.

The inadequacy of atlases and text-book illustrations for the vivid portrayal of clinical surgery has long been recognized, but until the present time has never been conquered even by the most artistically executed casts. The wonder is that the medical profession, and particularly the ingenious profession of our own country, had never before resorted to the stereoscope to bring out the startling relief that is the chief characteristic of that instrument. As here applied the effect is actually more surprising than can be appreciated by mere word description. The excellence of the pictures, the ingenious and convenient mechanism of the staging and illumination, the accurate and complete legends accompanying each illustration, and the character of the work of the contributors all bespeak the highest degree of effectiveness for the production; but only the actual view of one of these sections under the stereoscope can convey the true impression which this machine portrays. The effect

is indeed startling in its reality. There are so many features of excellence that make for convenience and vividness that it is difficult to include them all in a short description. The loose-leaf ledger arrangement of the subject-matter offers not only the most appropriate method for operating the machine, but has the added value of affording room for future inserts at any stage of the operation, complete though they may seem at present. The paper, type and photographic work are of the very best for the purposes intended.

Of course, the unique feature of Dr. Bodine's herniotomy lies in the fact that it is done under local anesthesia, and hence greater care is needed for the isolation of the nerves, blood-vessels, etc. In principle, the operation is very much the typical Bassini radical herniotomy. And as Dr. Bodine well says, even greater care must be observed in the early stages of the operation than later on, for once our patient is actually hurt early in the course of the operation, his confidence and hence his tranquillity are immediately shaken, whereas toward the close his fortitude against pain is strengthened by the knowledge that it need not be long endured.

In looking through the illustrations of this section, one cannot but wish that the operator had either worn gloves or that his finger-nails had been cropped sufficiently short to prevent their having collected the blood which, appearing black as it does, gives to the student a very unpleasant sensation as to cleanliness. And yet, when one stops to consider the difficulties that must surround the photographic part of the work, in the way of keeping the field absolutely bloodless and bringing the parts into the best possible view, he is inclined to forgive what he must know to be only an erroneous impression.

For the man in his office who wants to keep in mind the different steps of various operations without the expenditure of the time and money necessary to witness the actual work of the individual operators, this method will excel all others combined and the gratitude of the profession is due Dr. Kelly for his zealous effort in their behalf.

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EDITORIALS

SERUM TREATMENT OF HEMORRHAGIC DISEASE OF THE NEWBORN.

Many things as yet remain obscure as to the etiology of that symptom-complex commonly known as hemorrhagic disease of the newborn. For those cases that manifest themselves by early bleeding, i. e., within the first twenty-four hours, it seems reasonable to exclude extra-uterine infection as the causative factor, and particularly so when the condition is unaccompanied by any other clinical manifestations of infection such as fever, enlarged spleen, leucocytosis, positive blood-cultures, etc. Yet just this picture is presented by quite a few of the reported cases. Syphilis does undoubtedly play a certain rôle in the production of the disease, but it is a decidedly insignificant one; certainly less than 10 per cent. Latterly the view has become pretty generally accepted that one of two pathologic changes is at the bottom of the syndrome; viz., either an alteration of the walls of the minuter blood-vessels to such an extent as to permit of an abnormal diapedesis of the red cells, or some alteration in the chemical composition of the blood that materially lengthens its coagulation time. And indeed it is the latter factor that is at present credited with the greatest importance in the production of this highly fatal malady.

Just what the changes are in the blood of these little bleeders, it is difficult to say; the more so because of our incomplete knowledge of the physiologic factors of normal blood coagulation. Many facts concerning the process are, however, pretty definitely agreed upon as is well outlined in Schwartz and Ottenberg's article in the July number of the *American Journal of Medical Sciences*. For instance, it has for some time been recognized that the fibrin ferment which is necessary to act on fibrinogen in order to form fibrin, does not circulate free in the blood, but is formed probably from two pre-existing substances, prothrombin and thrombokinase, and this only when calcium is present. The prothrombin is thought to be present in the plasma and the thrombokinase to be

derived from the blood platelets. That clotting does not continue up the lumen of the vessels is due to the presence of an antifibrin ferment which neutralizes any fibrin ferment present in the serum, but having less affinity for fibrin ferment than has fibrinogen.

The authors quoted believe the essential change in the blood to be an impaired coagulability. And of the factors to be considered in this impaired coagulability they believe that the most potent is the absence or diminution of thrombokinase. Clinical absence of fibrinogen has never been known to occur. Likewise, while the presence of calcium is absolutely essential to the formation of fibrin ferment, yet it is doubtful if the amount of calcium is ever clinically reduced sufficiently to interfere with coagulation. In the same way, while bile-salts in the test-tube prevent both the action and the formation of fibrin ferment, yet such concentrations are thus required as never occur in the body blood. Hirudin, acids, peptones, autolytic products, etc., also inhibit blood coagulation.

Hence it becomes obvious that until we are more familiar with the underlying pathology of this disease, our treatment must remain more or less empirical. For a long time it was thought that the exhibition of the salts of calcium where there was delayed coagulability was rational therapy. Now the fallacy of such procedure is apparent from our knowledge of the various factors that may induce the phenomenon, and the small likelihood of the calcium content being at fault. Gelatine subcutaneously has had its advocates but it is doubtful if it has any other than a purely local effect in increasing coagulation. More modern therapy begins with the work of Weil in the subcutaneous and intravenous introduction of alien sera. By experimenting with a case of hemophilia, he found that there was marked shortening of coagulation time after intravenous injections of serum, the effect persisting for about a week and being lost completely only after five weeks. That the serum must be fresh goes without saying because of the rapid disappearance of fibrin ferment from serum on standing. Schwartz and Ottenberg place but little confidence in the ability of serum injections to alter the coagulating power of the circulating blood for several reasons. First, the injection of large amounts of fibrin ferment into the circulation causes extensive intravascular clotting, and often death, for which reason the old method of transfusion of defibrinated human blood was abandoned. Likewise intravascular injection of small amounts of thrombokinase causes death with multiple thrombi. But the moderate injection

tion of fibrin ferment is followed by rapid neutralization by the excess of antifibrin ferment, and hence no bad results follow doses of from 10 to 30 c.c. But if the fibrin ferment is thus neutralized the only virtue of the treatment would lie in the possibility of the proferments being thus made available for therapeutic effect.

At the present time, transfusion probably offers the most logical and effective means of treatment, because it not only replaces the lost blood, but stops the hemorrhages by supplying new material for the production of fibrin ferment. Naturally we cannot expect it to repair any actual tissue destruction nor to overcome any virulent infection already present, but it nevertheless remains at the present time our most effective means of controlling these hemorrhages.

PUBLIC INDICTMENT OF MEDICAL TRAINING.

Nobody realizes more keenly than the medical profession itself, the enormous overproduction of poorly-trained doctors and the superfluity of insignificant medical schools whose sole excuse for existence was the selfish interests of their respective faculties or possibly only their deans. But thanks due to the untiring efforts of the Council on Medical Education of the A. M. A., an organized effort was initiated several years ago toward abolishing the inferior and poorly equipped medical institutions or else merging them into a fewer number of bigger and better schools. This movement was instituted almost ten years ago within the ranks of the medical profession itself and it meant considerable personal sacrifice for many who had spent both time and money toward fostering the smaller schools. Yet not a word of complaint came from the lips of those who were big and broad enough to see that their loss meant a distinct gain to the cause of medical education. The campaign did not stop there, but every year the Council has continued laboring ceaselessly for the uplift of its cause, for better laboratory equipment, for better-trained instruction and for the increased training preliminary to entrance into the medical school.

All this is a matter of history, both past and present, with the profession, and yet a late issue of *Collier's Weekly* comes out with what it is pleased to call "a searching and brilliant exposure of medical education in the United States and Canada," in the form of a report to the Carnegie Foundation for the Advancement of Teaching, the work of Abraham Flexner.

The report charges that for twenty-five years past there has been an enormous overproduction of poorly-trained medical men and this without regard to the welfare or needs of the United States in which physicians are four or five times as numerous as in older countries like Germany. Likewise until recently the medical school business was a profitable one, for equipment was not demanded and patronage was secured through advertising methods. It is said that over one-third of our medical schools have incomes of less than \$10,000 per annum, a very insignificant sum upon which to maintain a properly conducted medical college. The argument that the inadequate school is a necessity for the poor boy does not, of course, hold, for, as is well said, the poor boy has no right to go into any profession for which he is not willing to obtain adequate preparation. It is axiomatic that what is needed is a smaller number of schools, better equipped and better conducted, there resulting fewer physicians, better educated and better trained. The startling statement is made that a reduction of our 150 medical schools to 31 would deprive of a medical school no section that is now capable of maintaining one. The recommendations are practically identical with those made by the Council, viz., the state university entrance standard in the South, the two-year college basis as a legal minimum in the rest of the country and the degree standard in a small number of institutions.

On the other side comes the *Literary Digest* quoting an article in the *New York Medical Journal* by Dr. Geo. F. Butler, in which the profession is criticized for being "too scientific." There is probably some truth in the author's statement that we are apt to lose sight of our patient in the study of his disease, but the charges that sympathy for the patient is lost and that time and energy are wasted gathering statistics, are not true in the vast majority of cases. Where would the sciences of medicine and surgery be to-day were it not for the carefully tabulated and reported records kept by our energetic ancestors and predecessors? It would be far better for both the public and the profession if more and fuller statistics were kept and more "case reports" made and published. The trouble lies in the fact that many of our profession are not blessed with a sufficient amount of energy and patience to make and preserve accurate and detailed case records with the findings demanded by modern diagnosis. They would prefer to leave a pill or a powder for some symptom or set of symptoms and then wail at the so-called "therapeutic nihilist" who demands first a defi-

nite diagnosis before working out his treatment. The writer (Dr. Butler) goes on to say that one of the most potent reasons "why the medical profession is losing caste is to be found in the relations of the members shown between each other, which cannot but be observed and debated upon by the public." He blames the profession with an amount of bigotry, intolerance and persecution unequalled in any other class of like intelligence. Illiberality, disunity and fraternal disloyalty are attributes ascribed to what should be one of the greatest and most influential organizations of society. If these charges be true, then each member of our great organization is more or less derelict in his duty to it, for strict adherence to the principles upon which the American Medical Association is founded will permit of the exhibition of no such selfishness nor conceit as the author indicates.

It is assumed, of course, that one who is thus attacking the beam in his brother's eye has already freed his organs of vision of their mote, and so theoretically the author of such criticism is far above reproach in his attitude toward the profession. He is doubtless doing all in his power to promote harmony of feeling in his organization; his attitude and his comments concerning his brother practitioners are unquestionably ones of broad tolerance, destined to instill into his hearers a spirit of loyalty of the purest type. And yet one cannot help reflecting that he would be accomplishing far more for the cause advocated by limiting his audience to his fellow practitioners than by accompanying a lay reproduction of his diatribe on his own profession by his picture with the nauseating label, "A candid friend of the medical profession."

EDITORIAL NOTES

AT THE present time those who apply for license to practice medicine in Michigan are required to pass an examination in refraction. This is in keeping with the movement to place the family physician in position to adjust glasses and thus prevent patients from seeking the services of opticians and spectacle venders who have no knowledge of medicine.

GOVERNOR MARSHALL has reappointed Dr. W. A. Spurgeon, of Muncie, and Dr. M. S. Canfield, of Frankfort, members of the Indiana State Board of Medical Registration and Examination. Dr. Spurgeon represents the Physio-Medical School and Dr. Canfield the Eclectic School. We

believe that the appointments are merited, for both Drs. Spurgeon and Canfield have proven themselves valuable members of the Board and have always stood for a high standard.

VACATION time is here again. The busy doctor will do himself and his patrons simple justice if he takes advantage of the season and makes an opportunity to get away from work for a period of rest and recreation. From two to four weeks by lake, or seashore, in the mountains or in the forests, where the telephone bell is never heard and where the vocation is for the time entirely forgotten, will go a long way toward creating new energy, enthusiasm and capacity for work.

THE next session of the Indiana State Medical Association will be held in Fort Wayne the last week in September. No better time could have been selected and the attendance should be a record breaker. Fort Wayne is reached by numerous railroad and interurban lines, and offers abundant facilities for properly caring for conventions. The local medical profession will act as host and that alone means that the visitors will receive a cordial welcome and generous entertainment and hospitality.

THE Committee on Medical Education, which reported at the St. Louis session of the A. M. A., severely condemned some of the St. Louis medical colleges because they are not only poorly equipped but fail to properly educate students. The proprietor of one of the condemned institutions has not taken the criticism kindly, but has retaliated by bringing a damage suit against the committee making the report. This action ill becomes a body of medical men of right motives, and can not but add further discredit to the institutions they represent. If they followed the proper course they would profit by the criticism and either raise the standard of their institutions or go out of the medical college business. St. Louis, like Chicago, has been tolerating several "diploma mills" and it is time that such colleges were either closed or forced to brace up.

A FORT WAYNE woman depended upon a Christian Science healer to relieve her child who had swallowed a quantity of poison sufficient to produce fatal results. The inevitable followed, and the child's death called forth some criticism from the daily papers. Usually the slightest allusion to Christian Science by the daily papers

calls forth a lengthy defense from the so-called Christian Science Publication Committee, but in this instance not a peep was heard. It is presumed that the Christian Scientists think the less said the better. If a supposedly sane adult desires to trust to Christian Science to prevent the fatal results from an overdose of poison instead of resorting to a stomach pump and the recognized antidotes we have no criticism to offer, but it is nothing short of criminal that an innocent and defenseless child should suffer from the practice of such a fanatical belief. It is regretted that criminal action is not brought in every such instance.

IT IS NOT too early to begin working for much needed medical legislation and one of the urgent needs is a large appropriation for the medical department of the university. We now have but one medical school in Indiana and that is under state supervision and control. It deserves and should have liberal treatment from the next state legislature, and a large appropriation is needed to place the institution on a plane with the medical departments of other state universities. Present day medical education requires well equipped institutions and a large force of competent instructors. The medical department of Indiana University has the instructors but needs more and better equipment. Indiana is a large, well populated and wealthy state. There is therefore no reason why the educational institutions of the state should not rank with the very best in the country, and they will if our law makers will provide suitable appropriations. Every candidate for a legislative position should be pledged to work for the Indiana University and made to feel that he has a duty to perform in making the University in all of its departments something of which every resident of Indiana should be proud.

DEATHS

DR. W. A. SNOOKE, aged 35, of New Corydon, is dead of Bright's disease.

DR. JAMES ANDERSON, a prominent physician and surgeon, of Versailles, died at his home June 11, suddenly, of acute indigestion. He was the oldest physician in Ripley County, and had recently returned to Versailles and resumed practice after practicing a number of years in Hot Springs and Oklahoma City.

DR. CARL W. J. SCHILLING, aged 54 years, died shortly after midnight Sunday morning, June 12, at his home in Fort Wayne. Death was due to complications following an illness a year ago, which developed into cancer of the lung.

Dr. Schilling was born in 1855 in Bavaria and came to America in 1876. He studied medicine at the Missouri Medical College, from which he was graduated with a record equaled by but one student in the history of the school. Twenty years ago he came to Fort Wayne and entered into the practice of medicine. In 1889 and 1890 he studied in Germany to further fit himself for his profession.

The deceased was a 32-degree Mason. He was also a member of the Elks and various medical organizations. In business he was president of the *Freie Presse* Publishing Company and the Fort Wayne Testing Laboratory Company. He was also a director of the National Steel Casting Company of Montpelier, Ind.

DR. JAMES PHILIP WALLACE, aged 70, formerly a prominent physician of northern Indiana, died suddenly at Noartes, Ariz., as he was on his way from a Mexican fiber plantation to his home in Colorado Springs, Col. During the Civil War Dr. Wallace was a surgeon in the army of the North, being decorated for bravery and devotion to the cause. He was a son of James Wallace, one of the pioneer merchants of this city. He was educated in medical colleges in New York and Philadelphia and was connected with the Bellevue Hospital, in New York city, for several years.

NEWS, NOTES AND COMMENTS

DR. M. H. YOUNG, of Harmony, is Republican nominee for coroner.

DR. B. F. SPELLBRING has recently moved from Saline City to Terre Haute.

DR. F. L. HULSMAN formerly of Brazil, has recently moved to Shelbyville.

DR. GEO. R. TUBBS and Miss Bessie Florence Whitehead, both of West Point, were married June 7, 1910.

THE REGULAR MEETING of the Northern Tri-State Medical Association was held at Elkhart Tuesday, July 12.

DR. O. G. PFAFF, Indianapolis, suffered a broken leg from an automobile accident while touring in the East.

DR. ALBERT SEATON, Indianapolis, has resigned his commissions as Major and Surgeon in the Indiana National Guard.

DR. J. C. GIFFORD has recently returned to his home in Brazil, with health greatly improved as result of several months' sojourn in Florida.

DR. and MRS. JOHN G. WISHARD have returned from Persia, where he has lived since 1888. Dr. Wishard will make Indianapolis his home.

THE TWELFTH ANNUAL CONFERENCE of the American Hospital Association will be held at the Planters Hotel, St. Louis, September 21 to 23, 1910.

DR. CHAS. E. WOODS, of Indianapolis, and Dr. Wm. A. Millington, of Indianapolis, have been appointed interns at St. Elizabeth's Hospital, Lafayette.

DR. MOSES THORNER, police surgeon, of Indianapolis, has been requested to resign by Mayor Shank. Dr. Ira E. Dunlavy is scheduled to be appointed in Dr. Thorner's place.

THE NEW STATE TUBERCULOSIS HOSPITAL, at Rockville, was opened July 1 for patients. The dedication is expected to take place September 16, if sufficient funds can be obtained.

THE GOVERNOR has reappointed Dr. W. A. Spurgeon, of Muncie, and Dr. M. S. Canfield, of Frankfort, as members of the State Board of Medical Registration and Examination.

DR. C. F. TAYLOR, formerly of Indianapolis, but now of Philadelphia, has been visiting Dr. S. E. Earp recently. Dr. Taylor established the *Medical World* when he went to Philadelphia.

THE CITY BOARD OF HEALTH, of Indianapolis, cannot find sufficient physicians to serve as interns at the City Hospital and Dispensary. There are twelve places and only seven physicians have applied for examination.

MR. HENRY PHIPPS, of New York, has selected the University of Pennsylvania to carry on the work of the Phipps Institute. The work will be divided into three general departments, each of which will be presided over by a director.

THE COMMENCEMENT of the Indiana University School of Medicine was held at Bloomington June 22, at 10 a. m. The address was delivered by Dr. Frederick J. Turner, professor of American history, University of Wisconsin. The degrees were conferred by President W. L. Bryan.

THE FORT WAYNE MEDICAL SOCIETY held an outing at Robison Park June 28 in the place of the regular scientific session. A baseball game (married men vs. single men) was one of the features of the afternoon. The evening was devoted to vaudeville, bowling, dancing, etc.

DR. W. B. MILLER and wife, of Marion, celebrated their golden wedding anniversary June 14. Dr. Miller has been a resident of Marion for the past eleven years. He bears the distinction of being the first white child born in the city of Bluffton, where he resided continuously until coming to Marion.

ON WEDNESDAY EVENING, June 15, several hundred graduates of the Indiana University School of Medicine and its predecessor schools held a banquet at the Claypool Hotel, Indianapolis. Dr. F. C. Heath was toastmaster. Drs. Sexton, Williams, Ritter and others responded to toasts. Dr. Alfred E. Stengel, of the University of Pennsylvania, delivered an address on "Heart Lesions" before the banquet.

AT A RECENT meeting of the House of Delegates of the Indiana State Medical Association, held at Indianapolis July 5, 1910, the following resolutions were passed:

Resolved, That in harmony with the general sentiment in the medical profession, the House of Delegates of the Indiana State Medical Association, in regular session at Indianapolis, heartily endorses the Hon. Robert L. Owen, in his speech in the U. S. Senate, and his proposed bill favoring a Department of Public Health, with a physician at its head, who shall be a member of the cabinet of the President; and be it also

Resolved, That these resolutions be published in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION, and a marked copy of the same be forwarded to Senator Owen, at Washington, D. C.

following articles have been approved by the Council on Pharmacy and Chemistry of the American Medical Association for new and non-official remedies:

Parathyroid Tablets (Armour & Co.).
Corpus Luteum Desiccated (Armour & Co.).
Pituitary Body Desiccated (Armour & Co.).
Pituitary Tablets (Armour & Co.).
Ferratin (Merck & Co.).
Arsenoferratin Tablets (Merck & Co.).
Arsenoferratose (Merck & Co.).

SINCE the publication of the June number the following physicians have been reinstated as members of the Indiana State Medical Association:

MARION COUNTY.**INDIANAPOLIS.**

W. F. Clevenger.
W. D. Hoskins.
W. T. S. Dodds.
C. O. Durham.
H. M. Woolen.
T. B. Eastman.
H. C. Gemmill.
J. E. Morrow.
Geo. J. Cook.
J. D. McLeay.
A. L. Wilson.
J. H. Oliver.

MILLERSVILLE.

J. V. Bower.

LAPORTE COUNTY.**LAPORTE.**

Wilbur W. Ross.

GREENE COUNTY**JASONVILLE.**

G. G. Osbon.

ADAMS COUNTY.**BERNE.**

Darby Jones.

GENEVA.

O. M. Graham.

HENDRICKS COUNTY.**PITTSBORO.**

C. W. McClintock.

DELAWARE COUNTY.**ALBANY.**

U. G. Powers.

WASHINGTON COUNTY.**FREDERICKSBURG R.**

F. D. No. 18).
W. H. Cook.

HOWARD COUNTY.**KOKOMO.**

J. H. Ross.

MADISON COUNTY.**ANDERSON.**

O. E. McWilliams.

MARSHALL COUNTY.**ARGOS.**

W. C. Sarber.

OWEN COUNTY.**FREEDOM.**

Jas. T. Hazel.

SPENCER.

R. R. Coble.

THE Indiana medical profession was represented at the American Medical Association by the following, who registered at the general headquarters:

ARTHUR, S. I., Patoka, LaCede.
ABBOTT, CLARENCE, Ottwell.
ALLEN, W. WEST NEWTON, The Warren.
BARNETT, C. E., Fort Wayne, Jefferson.
BARTHOLOMEW, A. C., South Bend, Windemere.
BECKNELL, I. J., Goshen, Marquette.
BLAND, CURTIS, Greensburg, Beers.
BOYERS, JAMES S., Decatur.
BOYER, J. S., Decatur, Jefferson.
BOYD, H. B., Cambridge City, Webster Grove.
BOOR, M. A., Terre Haute, American.
BOWERS, H. C., Scircleville.
BROSE, LOUIS D., Evansville, Maryland.
BRUCKER, CHARLES W., Tell City, 1458 S. Grand Ave.

BRUDI, G. G., New Haven, Kendall.
BRAYTON, A. W., Indianapolis, Stratford.
BUCK, G. M., Burrows.
BULSON, ALBERT E., Jr., Fort Wayne, Marquette.
BUCKLIN, G. W., Muncie, American.

CARSON, S. L., Lincoln City, 1322 Spring.
CARSON, L. O., New Augusta, St. James.
CHAPPELL, R. S., Indianapolis, Maryland.
CLUTHIE, WM., Tell City, Edison.
CLARK, S. A., South Bend, Jefferson.
COOK, GEORGE J., Indianapolis, Planters.
COOK, C. P., New Albany, Grand Central.
COOK, J. H., Terre Haute, E. St. Louis.
COMBS, GEO. W., Indianapolis, Planters.
COWEN, LEWIS C., Rising Sun.
COWEN, L. C., Rising Sun, Rozier.
COX, D. A., Howell, 5747 Page.
COX, E., Kokomo, Southern.
COY, P. Y. M., Evansville, Terminal.

DAUGHERTY, C. A., South Bend, Southern.
DINSMORE, WALTER H., Kramer, Maryland.
DUGAN, THOMAS J., Indianapolis, Planters.
DANIELS, E. O., La Fontaine.
DIELMAN, F. C., Fulton, Benton.
DIERKING, A. W., Oolitic.
DODDS, W. T., Indianapolis, Buckingham.
DOW, WM. S., Indianapolis, 3920 Russell.
DOESS, J. E., Mt. Vernon, American.
DUPUY, C. M., Riley, American.

EARHART, T. W., Mulberry, Normandy.
ECKELMAN, M. M., Elkhart, Colisenn.
ELLIOTT, J. C., Guilford, Grand and Delmar.
ELROD, S. B., Henryville, 1022 Dolman.
ENGLISH, C. H., Ft. Wayne, 4300 Lindell.

FORD, J. H., Indianapolis, Planters.
FOXWORTHY, FRANK W., Indianapolis, Southern.
FRIEDENWALD, JULIUS, Baltimore, Planters.
FREEMAN, EDWARD D., Osgood, Southern.

GALBRETH, W. H., Rockfield, Benton.
GILLESPIE, Greencastle, Planters.
GIBSON, J. P., Stewartsville, Benton.
GILBERT, W. H., Evansville, Planters.
GILLUM, J. R., Terre Haute, American.
GOAR, C. S., Indianapolis, Rozier.
GRAHAM, ALOIS B., Indianapolis, Planters.
GRAESSELLE, GEO. G., Seymour, Southern.
GRAYSTON, W. S., Huntington, Jefferson.

HAYS, WOODWARD, Albion, Southern.
HERR, HENRY, Washington, Moser.
HOLDER, R. E., Columbus, Planters.
HOSKINS, W. D., Indianapolis, Warren.
HOY, B. F., Syracuse, Stratford.
HURTY, J. N., Indianapolis, Buckingham.
HADLEY, J. W., Frankfort, Marquette.
HARPOLE, C. B., Evansville, 3707 Page.
HASKELL, C. C., Indianapolis, Planters.
HAYS, T. A., Burns City, 3620 W. Pine.
HAYWOOD, C. W., Elkhart.
HAYDEN, A. M., Evansville, Moser.
HEITGER, J. D., Bedford, Planters.
HEIMANN, B., Evansville, Marquette.
HILL, H. B., Logansport, Southern.
HILL, L. B., Seymour, 2016 Russell.
HOFFMAN, G. E., Logansport.
HUGHES, W. L., Indiana Harbor.
HUTTO, O. D., Kokomo, Southern.
KAILO, G. D., French Lick, Jefferson.

JAY, M. T., Portland, American.
JEROME, J. N., Evansville, 4103 Botanical.
JOHNSON, G. C., Evansville, Normandie.
KALBFLEISCH, A. H., Peru, 1803 California.
KELLY, J. C., Mitchell.
KENNEDY, T. C., Indianapolis, Maryland.
KENNEDY, BERNAYS, Indianapolis, Planters.
KEMPER, G. W. H., Muncie, Marquette.
KERRIGAN, J. J., Michigan City, Hamilton.

KING, J. E., Richmond, Marquette.
 KIMBERLIN, A. C., Indianapolis, Planters.
 KNAPP, G., Vincennes, Ben Blewett, Hawthorne Ave.
 KNAPP, H. C., Huntingburg, 2620 Washington.
 KUHN, B. F., Elkhart.
 KYLE, J. J., Indianapolis, Planters.

LEACH, W. J., New Albany, Grand Union.
 LAYMAN, D. W., Indianapolis, Jefferson.
 LINVILLE, S., Columbia City, Warren.
 LUCKETT, C. D., English, Laclede.
 LUCKEY, H. R., Seymour, Southern.
 LUKEMEYER, E. G., Huntingburg, 2620 Washington.

MARKLEY, Pennville, 518 North Spring.
 MATTISON, J. A., Marion.
 MATTOX, E. L., West Terre Haute, 2324 Virgilia.
 MATTOX, W. K., Terre Haute, American.
 MAXEDON, THOS. H., Vincennes, Southern.
 MAXWELL, A., Indianapolis, American.
 MAY, ALBERT, Crothersville.
 MCALEXANDER, R. O., Indianapolis, Rozier.
 MCCASKEY, G. W., Fort Wayne, Terminal.
 MCCULLY, CHAS. H., Logansport, Southern.
 McDONALD, W. B., New Augusta, St. James.
 MCGOWEN, T. J., Vincennes, Southern.
 MCKEEMAN, R. B., Ft. Wayne, Kendall.
 MCSOSCAR, E. J., Fort Wayne, Jefferson.
 MEYER, J. H. W., La Porte, Jefferson.
 MILLER, G. D., Logansport, Washington Inn.
 MILLER, CHAS. E., Muncie, Marquette.
 MOFFITT, W. R., West Lafayette, Marquette.
 MOORE, H. A., Indianapolis, Jefferson.
 MORGAN, E. E., Fort Wayne, Kendall.
 MORRISON, F. A., Indianapolis, Maryland.
 MYERS, I. N., Maples, Benton.

OLIVER, J. H., Indianapolis, Marquette.
 OLMSTED, RUSSEL T., Milan, 3503 Franklin Ave.

PAGE, LAFAYETTE, Indianapolis, Jefferson.
 PANTZER, H. O., Indianapolis, Marquette.
 PEYTON, DAVID C., Jeffersonville, Jefferson.
 PIERSON, ALLEN, Spencer, Marquette.
 PORTER, MILES F., Ft. Wayne, Jefferson.
 POTTER, T., Indianapolis, Marquette.
 RAMSBROK, C. R., Huntingburg, 5333 Florissant.
 RAMSEY, D. C., Mt. Vernon, American.
 RAWLINGS, C. L., New Harmony, 6139 Plymouth.
 REAGAN, R. W., Monon, Warren.
 REED, J. H., Logansport, American.
 REDDEN, T. O., Jolietville, Portland.
 REYNOLDS, D. M., Clayton, 4038 Morgan.
 RICE, S. M., Terre Haute.
 RIETZ, P. C., Evansville, 3942 Delmar.
 RISTINE, W. H., Crawfordsville, Planters.
 ROOPE, A. P., Columbus, Planters.
 ROSENTHAL, M. I., Fort Wayne, Maryland.
 ROTHROCK, M. W., Howell, 3717 Lincoln.

SCHMAUSS, L. F., Alexandria, 3887 Delmar.
 SCHUMAN, O. V., Columbia City, Warren.
 SIMONDS, JAMES PERSONS, Indianapolis.
 SIGMOND, H. W., Crawfordsville, 5064 Raymond.
 SHAFER, W. S., Rochester, Southern.
 SHIRLEY, H. W., Shoals, Granville.
 SHONKIMLER, JOSEPH, Rockville.
 SHOAT, S. A., Veedersburg.
 SHORT, R. B., Union Mills, Southern.
 SMITH, L. W., Wabash, Stratford.
 SOMES, J. F., Vincennes.
 SOWDER, CHAS. R., Indianapolis, American.
 SPIGLER, O. R., Terre Haute, Planters.
 SPINK, U., Indianapolis, Buckingham.
 SPINK, T. F., Washington.
 STERNE, A. E., Indianapolis, Jefferson.
 STEVENSON, D. W., Richmond, Marquette.
 STILLSON, J. O., Indianapolis, Marquette.
 STONE, CHAS. E., Snaals, 1721 Washington.
 STRANGE, J. W., Loogootee, 3620 W. Pine.
 SWERINGEN, B., Fort Wayne, Maryland.

TAYLOR, J. E., Leopold, 2620 Washington.
 THIEME, G. C., Baltimore, Planters.
 THOMPSON, H. H., Noblesville, Marquette.
 THOMPSON, J. L., Indianapolis, Marquette.
 THOMPSON, WM. H., Wiuamac, 6036 Westminster Place.
 THURSTON, H. S., Indianapolis, Maryland.
 TOMLIN, WM. S., Indianapolis, Jefferson.
 TROUTMAN, R. E., Logansport, 3860 Juniata St.
 TRUSLER, L. S., Oakland City.
 VARBLE, W. M., Jeffersonville, Maryland.
 VARNER, G. W., Evansville, Terminal.
 VIEHE, C. G., Evansville, Planters.
 WALLACE, L. S., Bunker Hill, 2235 Thurston Blvd.
 WALKER, EDWIN, Evansville, Southern.
 WANGELIN, H. E., Belleville.
 WATERS, S. C., Middletown, Laclede.
 WATERS, S. C., Middletown.
 WEISS, H. G., Rockport.
 WILLEFORD, G. W., Washington, 641 N. Ninth St., East St. Louis.
 WIEDEMANN, F. E., Terre Haute, 4308 Washington Blvd.
 WISHARD, WM. N., Indianapolis, Southern.
 WORK, J. A., Jr., Elkhart, Windemere.
 WORK, J. A., Elkhart, Windemere.
 WORSHAM, L., Evansville, 5085 Kensington Ave.
 WYNN, FRANK B., Indianapolis.
 YENCER, M. W., Richmond, 2751 Alben.
 YOCUM, M. G., Mentone, 3519 Lucas.
 YUNG, J. R., Terre Haute, American.

SOCIETY PROCEEDINGS

AMERICAN MEDICAL ASSOCIATION, ST. LOUIS SESSION.

The Sixty-first Annual Session of the American Medical Association was held at St. Louis, Mo., June 6-10, 1910. The registration was 4,070, this being the third meeting of the Association in point of size and only surpassed by the Boston session in 1906 and Chicago session in 1908. The weather was practically perfect and the local arrangements admirable.

The House of Delegates met on Monday morning in the auditorium of the St. Louis Medical Society. The President, Dr. W. C. Gorgas, U. S. A., read his address in which the work of the Association was commended and a number of suggestions made. The report of the General Secretary showed that during the past year 289 members had died, 1,937 had resigned, 1,031 had been dropped and 95 had been removed from the rolls on account of being reported as "not found," making a total loss of 3,352. During the year 3,593 new members were added, making a membership on May 1, 1910, of 34,176. The application of the Medical Association of the Isthmian Canal Zone for recognition as a constituent association was presented. The death of ex-President Herbert L. Burrell was commented on. The Secretary presented a tabulation showing the membership in the constituent state associations amounting to 70,146. The history of the secretaryship and its connection with the editorship of the *Journal* was reviewed. Dr. Simmons presented his resignation as General Secretary and asked that it be accepted. The report was referred to the Reference Committee on Reports of Officers.

The report of the Board of Trustees showed encouraging progress in all lines of Association work, the work of the Council on Pharmacy and Chemistry, Council on Medical Education, Committee on Medical Legislation, Committee on Nomenclature and Classi-

fication of Diseases and the Committee on Ophthalmia Neonatorum, being especially commended. The trustees recommended that the report of the Committee on Organization of a Council on Health and Public Instruction be carefully considered. The addenda to the trustees' report included a report from the subscription department, showing the average weekly circulation of the *Journal* for 1909 as 55,361. The treasurer's report showed a surplus in the treasurer's hands on Jan. 1, 1910, of \$163,340.72. The auditor's report showed property to the amount of \$172,081.86 and total assets of \$399,462.16. The report was referred to the Reference Committee on Reports of Officers. The report of the Committee on Medical Legislation was presented by Dr. C. A. L. Reed, of Cincinnati, chairman. The year's work on national and state legislation was reviewed. Dr. Reed presented his resignation as chairman of the committee. The report was referred to the Reference Committee on Legislation and Political Action. Dr. A. D. Bevan, Illinois, presented the report of the Council on Medical Education, stating that during the past year the second tour of inspection of medical schools of the country had been made, and submitting as a part of the report a classification of medical schools into three classes: (a) acceptable, (b) needing certain improvements to make them acceptable, and (c) those which would require complete reorganization. The report of the Council was referred to the Reference Committee on Medical Education.

At the afternoon session, the Board of Public Instruction and the director of the post-graduate work submitted their reports. Dr. F. Park Lewis submitted the report of the Committee on Ophthalmia Neonatorum, reviewing the work of the past year and recommending that its work be enlarged so as to include all preventable causes of blindness, also that renewed efforts be made to have all births reported promptly so as to make possible more thorough work in the prevention of blindness. The report was adopted and the committee continued.

Dr. H. O. Marcy, Massachusetts, submitted the report on Davis Memorial Fund, showing total contributions of \$2,771.34. Dr. Marcy presented his resignation as chairman and Dr. Billings presented his resignation as secretary of the Davis Memorial Fund. The report was referred to the Board of Trustees. The Committee on Nomenclature and Classification of Diseases reported progress. The Council on Defense of Medical Research reported the publication during the past year of thirteen pamphlets written by experts in the various fields and prepared for general distribution. The Council has also given much material to the daily press. The formation of a society of laymen for the promotion of medical research is being considered.

The reports of the following committees were presented: Patents and Trade-Marks, Uniform Regulation of Membership, Elaboration of the Principles of Ethics, and the United States Pharmacopeia. The Committee on Anesthesia reported progress. It finds itself as yet unable to submit full and final reports for publication, but reaffirms the finding of the Committee in 1908 that for general use ether is to be regarded as the safest anesthetic. Major M. W. Ireland, U. S. A., presented a report from the Committee on Insignia, recommending the adoption of an official button showing the knotted rod and serpent as the

insignia of the Association. Dr. Edward Jackson, Colorado, presented a report from the Committee on the Establishment of a Physicians' Sanitarium, recommending the appointment of a committee to draw up a plan for a corporate body to receive and administer funds for the relief of disabled physicians and to establish a sanatorium for physicians suffering from tuberculosis. The report was referred to the Board of Trustees. President Gorgas submitted a report from the Committee on Memorial to Medical Officers of the Civil War, showing that three members had been appointed and that the two remaining positions would be filled by the appointment of one volunteer surgeon from the Union Army and one from the Confederate Army. After the presentation of a number of resolutions, which were referred to appropriate committees, the House of Delegates adjourned until Tuesday.

The House met on Tuesday afternoon with the newly installed president, Dr. William H. Welch, in the chair. Dr. Frank B. Wynn, Indiana, presented the report of the Committee on Scientific Exhibit, recommending the preparation of cheap, compact and complete exhibits for the education of the public on all the problems of public health and comfort. Dr. Alfred Stengel, Pennsylvania, presented the report of the Committee on Scientific Research, showing that three grants of \$200 each had been made for the current year as follows: Dr. R. M. Pearce, New York; Dr. Gerald B. Webb, Colorado, and Dr. E. C. Rosenau, Chicago. The Committee on Organization of a Council on Health and Public Instruction recommended that the Committees on Organization, Medical Legislation, Public Instruction and Defense of Medical Research be abolished and that a council of five, to be known as the Council on Health and Public Instruction, be created. This report was referred to the Reference Committee on Amendments to the Constitution and By-Laws. The Reference Committee on Sections and Section Work reported, recommending the organization of a Section on Genitourinary Diseases, with the following officers to serve for the coming year: Chairman, W. T. Belfield, Chicago; vice-chairman, James Pederson, New York; secretary, Hugh Young, Baltimore. The committee recommended that sections on Physical Forces in Medicine and on Hospitals be not established at present. The report was adopted. The Reference Committee on Medical Education endorsed the work of the Council on Medical Education and recommended that the rating and classification of medical schools as determined by the Council should be made public, and that the Council should be instructed to continue its investigations. The classified list of colleges was presented as a part of the committee's report. (Copy enclosed.)

The Reference Committee on Reports of Officers recommended that the request of Dr. Simmons regarding his resignation as General Secretary be respected, and that his resignation be accepted in order that he might devote himself exclusively to the duties of editor of the *Journal of the American Medical Association*. This report was adopted. The Reference Committee on Miscellaneous Business recommended that reports of the Committees on Pharmacopeia, Nomenclature and Classification of Diseases and Miscellaneous Business be accepted and the committees continued. Dr. J. N. McCormack presented the report of

the Committee on Organization, reviewing the work done for a department of public health and presenting the following resolutions:

Resolved, That the President be, and is hereby authorized to appoint a committee of seven members, which shall be charged with the duty of framing a bill for a national Department of Health, to be presented to the next session of Congress in December, and that this committee shall consider and determine all matters and policies relating to national health legislation, and may invite the cooperation and cooperate with other organizations having the same purpose in view.

Resolved, That the principles of the Owen bill, having for its object the creation of a national Department of Health, now pending in the Senate, and similar bills introduced in the House by Representatives Simmons, Creger and Hanna, be, and are hereby, heartily approved by this Association, and the cordial thanks of the medical profession of the United States, officially represented by it, are hereby tendered to Senator Robert L. Owen, Irving Fisher and their co-workers for their able and unselfish efforts to conserve and promote the most important asset of the nation, the health and lives of its women, its children and its men, properly understood the greatest economic question now confronting our people.

The members of this Association stand for pure food, pure drugs, better doctors, the promotion of cleaner and healthier homes, and cleaner living for individuals, for the state and for the nation. We believe this to be held as equally true by the reputable and informed physicians of all schools or systems of practice.

We welcome the opposition of the venal classes long and profitably engaged in the manufacture of adulterated foods, habit-producing nostrums and other impositions on the people—to the extent of hundreds of millions of dollars annually—and express our sympathy for the well-meaning men and women who have been misled and worked into hysterics by the monstrously wicked misrepresentations of a corrupt and noisy band of conspirators and who are being used as blind instruments to enable them to continue to defraud and debauch the American people.

Medical science is advancing, especially on its life-saving side, with a rapidity unknown to any other branch of human knowledge. It is known of all men that our members in every community in the United States are unselfishly working day and night, instructing the people how to prevent tuberculosis, typhoid fever and the other diseases from which physicians earn their livelihood. Therefore, we welcome and will wear as a badge of honor the slanders of these unholy interests and their hirelings.

These resolutions were later on unanimously adopted by a rising vote.

Dr. T. D. Tuttle, Montana, moved the appointment of a committee to prepare suitable resolutions in regard to the death of Dr. Ricketts, after which the House of Delegates adjourned until Wednesday afternoon.

At the Wednesday session Dr. Rosalie Slaughter Morton, New York, was granted the privilege of the floor to present the report of the Public Health Education Committee. The Reference Committee on Legislation and Political Action commended the work of the Committee and Bureau of Medical Legislation, and recommended that Dr. Reed's resignation be accepted with an expression of appreciation of his untiring, loyal and faithful services. The Reference Committee on Hygiene and Public Health commended the work of the *Journal* in the direction of a sane Fourth of July. The Reference Committee on Reports of Officers submitted a supplementary report on Dr. McCormack's work, endorsing his recommendation of the appointment of a special committee of seven charged with the framing of a bill for a national Department of Health

to be presented at the next session of Congress. Following the adoption of this report, Dr. Guthrie, Pennsylvania, moved the adoption of the resolutions presented by Dr. McCormack. This motion was unanimously carried. The Committee on Awards recommended that a gold medal be given to Dr. Claude A. Smith, of Atlanta, Ga., for an exhibit of experimental researches on Hookworm Disease and that certificates of honor be awarded to the following exhibitors:

University of Minnesota, St. Louis University, St. Mary's Hospital, Rochester, Minn.; St. Louis City Hospital, Indianapolis Department of Public Health, University of Michigan, Dr. Honwink, St. Louis; Special Committee on Prevention of Blindness, New York, Northwestern University, Chicago; St. Louis Medical Club. The following resolutions were then presented and adopted regarding the death of Dr. H. T. Ricketts:

WHEREAS, Howard Taylor Ricketts, a member of the American Medical Association, lost his life on May 3, 1910, from typhus fever, contracted while engaged in an investigation of that disease in the City of Mexico; and

WHEREAS, He sacrificed himself in the study of a preventable disease, and in the interest of the health and lives of the human race; and

WHEREAS, His masterly attainments as a scientific worker in this and other fields rendered his life of inestimable worth to the medical profession and the world at large; therefore, be it

Resolved, That the American Medical Association, in convention assembled, herewith express its high appreciation of the ideals, the efforts and the achievements of this brilliant investigator, and its deep sorrow at the loss of a most brilliant investigator, and its deep sorrow at the loss of a most valued and cherished member; and

Resolved, That we herewith express our sorrow in the death of Dr. Conneffe, of Ohio, who lost his life as a result of infection with typhus fever while working with Dr. Ricketts in Mexico City; and

Resolved, That these resolutions be spread on the minutes of this Association and published in *THE JOURNAL*.

After the election of a number of associate members and the presentation of miscellaneous resolutions, which were referred to appropriate committees, the House adjourned until Thursday morning.

A special meeting of the House was held on Thursday morning to consider the report of the Reference Committee on Amendments to the Constitution and By-Laws. A large number of amendments, consisting mainly of verbal modifications, were adopted. The last meeting of the House of Delegates was held on Thursday afternoon, the election of officers being the first order of business. The following officers were elected: President, Dr. John B. Murphy, Chicago; First Vice-President, Dr. E. E. Montgomery, Philadelphia; Second Vice-President, Dr. R. C. Coffey, Portland, Ore.; Third Vice-President, Dr. W. G. Moore, St. Louis; Fourth Vice-President, Dr. H. L. E. Johnson, Washington, D. C.

When nominations for General Secretary were called for, Dr. I. C. Chase, of Texas, nominated Dr. Simmons for reelection in a speech which invoked repeated rounds of applause. In spite of the fact that his resignation had been presented and accepted, it was evident that the House of Delegates was determined to reelect him. After a large number of delegates from different states had expressed their views, Dr. Simmons was unanimously reelected. Dr. Frank Billings was nominated for reelection as treasurer by the Board of Trustees and was elected. The following

trustees were then elected to serve until 1913: Dr. W. W. Grant, Denver, Colo. (reelected); Dr. C. E. Cantrell, Greenville, Texas (reelected); Dr. Frank J. Lutz, St. Louis, Mo. The president appointed the following as members of standing committees, the appointments being confirmed by the House of Delegates:

The Council on Medical Education.—Dr. George Dock, St. Louis, to succeed Dr. E. E. Southard, to serve until 1915.

Council on Health and Public Instruction.—Dr. H. M. Bracken, Minneapolis, to represent public health; Dr. W. B. Cannon, Boston, to represent defense of medical research; Dr. Henry B. Favill, Chicago, to represent public instruction; Dr. J. N. McCormack, Bowling Green, Ky., to represent organization, and Dr. W. C. Woodward, Washington, D. C., to represent legislation.

The Reference Committee on Sections and Section Work recommended the election to honorary membership of Dr. Alfred Saenger, Hamburg, Germany, Mr. J. Herbert Parsons, F.R.C.S., London, England, and Dr. James H. Honan, Berlin. The Board of Trustees reported regarding the publication of special journals on surgery and pediatrics and after extended discussion the matter was referred back to the Board with full power to act.

Invitations for 1911 were presented from Los Angeles, Cal., and Buffalo, N. Y., and, on ballot, Los Angeles was chosen, 61 to 58.

The Reference Committee on Hygiene and Public Health presented a report condemning the multiplication of optometry boards and the appointment of non-medical and unqualified persons thereon, recommending the formation of a committee on the prevention of blindness and authorizing the appointment of a committee to cooperate with the Department of Commerce and Labor with a view to establishing proper visual standards and tests for pilots. Following the adoption of resolutions of thanks to the Missouri State Medical Association, the St. Louis Medical Society, Governor Hadley, Dr. Dorsett and the local committee of arrangements, the House of Delegates adjourned *sine die*.

The attendance of the House of Delegates was large, 133 delegates being registered. An enormous amount of legislative work was done, the bulk of which was transacted in committees. The revision of the Constitution and By-Laws and the reorganization of the standing committees will greatly strengthen the work of the Association and increase the possibilities for improved work. Taken as a whole, it was one of the most important sessions which the Association has held and the prospects for the coming year are better than ever before.

THIRD DISTRICT MEDICAL SOCIETY.

The society met in regular session, June 23, 1910, at the Tavern Hotel, New Albany, with President Easley in the chair.

The address of welcome was delivered by Col. C. L. Jewett of New Albany.

Dr. C. P. Cook of New Albany explained "Lane's Technic in Treatment of Fractures." Dr. Cook exhibited all the necessary instruments and appliances used to treat fractures by the open method. He reported a number of cases treated by this method.

Dr. Austin Funk of Jeffersonville read a paper upon "Injuries Affecting the Eye." This paper was a review of the eye injuries seen by general practitioners in every-day work.

The society then adjourned to the dining room where the doctors did justice to the occasion.

In the afternoon session, Prof. H. E. Buerk, superintendent of New Albany schools, delivered an address upon "Inspection of School Children."

He told what was being done for the relief of defective children in the public schools.

The society was favored by an excellent address from Dr. T. C. Kennedy, president of the State Association. Dr. Kennedy told of the beneficial results of medical organization.

Senator E. B. Stotsenburg of New Albany read a paper upon "Medical Legislation," in which he traced the growth of medical requirements from the admission of the state into the Union until the present time.

An interesting feature of the meeting was an address by Dr. J. M. Matthews of Louisville, upon the spread of venereal diseases, and how best to bring an accurate knowledge of the ravages of these diseases to the public, and what steps should be taken to stop their spread.

A resolution was passed by the society indorsing Senator Owen's bill now before Congress.

The society elected the following officers:

President—Dr. J. B. Duncan, Bedford.

Vice-President—Dr. J. B. Salb, Jasper.

Secretary—Dr. I. N. Ruddell, Jeffersonville.

Adjourned. AUSTIN FUNK, Secretary *pro tem*.

FOURTH DISTRICT MEDICAL SOCIETY.

The regular meeting of the Fourth District Medical Society was held at Lawrenceburg May 27. The scientific session was held on board the river steamer *Kentucky*. The president, Dr. George E. Denny, delivered an address on the value of a post-graduate course in medicine. Dr. O. H. Delong, of Columbus, presented a paper on Acute Rheumatism. Discussion opened by Dr. F. M. Mueller, of Lawrenceburg. Dr. John Elfers of Rising Sun reported an interesting case of mitral lesion of the heart with tuberculosis. Dr. R. F. Bannister, of North Vernon, read a paper on Early Diagnosis of Diseases of the Bile Tract. Discussion of this paper was opened by Dr. A. G. Oesterman, of Seymour, followed by Dr. T. C. Kennedy, president of the Indiana State Medical Association. Dr. D. E. Johnson, of Moores Hill, presented a paper on Diphtheria, which was discussed by Drs. J. W. House, of Indianapolis, and Charles Bird, of Greensburg. Dr. Simonds, of the Bacteriological Laboratory, Indianapolis, discussed this subject at length. Dr. Curtis Bland, of Greensburg, gave an interesting talk on proprietary preparations. Dr. J. K. Ritter presented a paper on Diseases of the Nervous System, and Dr. C. E. Holton talked on the subject of Malaria.

The election of officers for the coming year resulted as follows: President, J. P. Ward, Vevay; vice-president, John Elfers, Rising Sun; secretary, Curtis Bland, Greensburg. Next place of meeting, Greensburg.

A banquet was given at 6 o'clock at the Liedertafel Hall, which was decorated for the occasion. Dr. O. S. Jaquith, secretary of the Dearborn County Medical Society, acted as toastmaster.

ALLEN COUNTY.
FORT WAYNE MEDICAL SOCIETY.

(Meeting of May 10, 1910.)

Society met in regular session in the assembly room, with thirteen members present. Meeting called to order by President Barnett. Case report by Dr. E. E. Morgan. Patient well-nourished young lady, aged 23, complains of feeling weak; no other complaint; normal temperature and pulse; menses O.K.; eats and sleeps well. Absence of patellar and arm reflexes. No ataxic symptoms. Dr. Morgan asked for information in reference to diagnosis.

Dr. W. W. Carey presented a case of mycosis fungoides; patient been having quinin dressings for local treatment, but getting worse. Dr. Carey is now using injections of Coley's serum. No perceptible systemic effects from injections as yet. Patient had two hard chills, but not following injections. Dr. Beall said a section gives picture; piling up of small round cells, fairly well limited with some infiltration of the skin. There have been about 300 cases of this disease reported up to date. Dr. Carey said he had found from a review of literature that there have never been known to be two cases in one family, nor has anyone been infected from nursing.

Dr. Rhamy said the section has the appearance of fungus granuloma. Histologically, it is difficult to differentiate from sarcoma. Dr. Beall said there is an atrophic area left after they disappear; these atrophic areas often appear where there is no lesion, and this is one of the characteristics of the disease. Dr. Hamilton thinks the x-ray would be beneficial in this case. Dr. Porter suggested large doses of K. I. and unguentum hydrargyrum.

Dr. L. T. Rawles read a paper on the subject "Auscultation in Obstetrical Practice, with Special Reference to Funic Souffle." The author said he had observed funic souffle present 46 times in 206 cases. He said one should be on guard when funic souffle was heard, especially when low down.

Dr. Weaver, speaking on auscultation in obstetrics for determining sex of child, said that if heart beat is less than 130 the child is usually a male; if more rapid usually female. Dr. Morgan said with heart beat under 130 child is usually male; and Dr. Porter said if rate is 120 to 130 child is usually a boy. He said early child-bearing period usually results in boys and in later part boys, while in the intermediate period usually in girls. Also discussed by Drs. Hamilton, Beall and McOscar.

Adjourned.

J. C. WALLACE, Secretary.

(Meeting of May 14, 1910.)

Society met in regular session in the assembly room, with 14 members present.

Dr. Porter reported an interesting autopsy finding. Medical man had diagnosed case as stomach ulcer, and on operation did find constriction of the duodenum. The only pathological lesion was dilated colon, and some trouble with the appendix, which was removed. Patient died, and on post-mortem liver was found to be pale and in places hard. On cutting it looked like nutmeg liver. The duodenum was plastered onto the posterior wall of the stomach and attached to the tail of the pancreas, but could be separated from both stomach and pancreas without disturbing vessels. Examination showed that she had had chronic hepatitis and pancreatitis. An unusual anatomical condition was found. The duodenum occupied

a position as though a posterior gastroenterostomy had been made, with attachment to the middle of the stomach; and this was apparently covered with peritoneum. Dr. Porter believes condition congenital, as it did not have the appearance of inflammatory trouble.

Dr. Mentzer read a paper on "Tuberculosis of Bone," in which he said that tuberculosis of the bone is always secondary, and lesions are most often near epiphyseal line of bone. Vertebra and femur are most frequently affected. The author spoke on the differential diagnosis between tuberculosis and acute infective osteomyelitis. Both constitutional and drug treatment is indicated; local treatment non-operative; physiologic rest; orthopedic apparatus and traction. He also uses artificial congestion by using constriction above lesion, as tubercle bacilli do not thrive well when bathed in blood. Operative treatment, acupuncture, curettage and removal of bone.

In the discussion Dr. Porter said that the teaching now is that tubercular abscesses pure and simple are not to be opened unless for some particular reason, because there is likely to be pus infection along with tubercular infection. Good results seem to follow in these cases by simply relieving the tension, as by drawing off serum and filling abscess cavity with iodoform and glycerin emulsion. Open-air treatment is as applicable in tuberculosis of bone as in tuberculosis of the lungs.

The paper was also discussed by Dr. McOscar, who spoke on Bier's treatment, and Dr. Weaver, who called attention to the differential diagnosis between tuberculosis and syphilitic dactylitis. Dr. Weaver also said that Beck's paste and vaccine treatment have diminished the fear of secondary infections. Closed by Dr. Mentzer.

Adjourned.

J. C. WALLACE, Secretary.

(Meeting of May 24, 1910.)

Society held a public meeting in Assembly Room, with 16 members and 125 visitors present. Meeting called to order by president.

Dr. D. R. Silver, of Sidney, Ohio, read a paper on "Rights of the Unborn." He said in part that misinformation is the cause of untold misery and not little actual crime. There is a prevalent belief that at some time during the nine months concerned in the development of the unborn there is no real life, and therefore interference with the process of gestation might be justifiable. This grave mistake is the fault of society in neglecting to teach the truth and impart information to those who propose to enter into the marriage relation. He said that young men must be taught that they cannot with impunity violate the moral law and trespass upon the rights of society, and then expect aid and comfort from that noble profession whose aim is to save life and not to destroy it. When such persons realize the enormity of the offense and are made to pay the penalty of their folly, some progress will have been made in their moral reformation. The latter part of the address was devoted to the doctor who would prostitute the honor and knowledge gained in the study of medicine for the slaughter of the innocents. He stated that the general consensus of opinion is that the only way to reach such offenders is by commuting the guilt of the woman so that she shall not be regarded as an accomplice. In two states already there are statutes to this effect, and that she shall be a competent witness. Kentucky was the first

to adopt this law, then Ohio followed, and Dr. Silver hoped that Indiana would be next to follow when its legislature convenes.

At the conclusion of Dr. Silver's address, Dr. Miles F. Porter discussed the question from the surgical side; Dr. W. D. Calvin, the medical side; Attorney H. L. Townsend, the criminal side, and Rev. Earle Todd, the moral side. Mrs. Guldin also discussed the subject. A vote of thanks was extended to Dr. Silver and those who took part in discussion.

Adjourned.

J. C. WALLACE, Secretary.

CLAY COUNTY.

The regular meeting of the Clay County Medical Society was held in Brazil June 16. Dr. J. L. Lambert presented a paper reporting recent anomalous cases in his practice, with pathological specimens. Drs. Pell and Young made report of their observations in a medical way during a recent trip through the Rocky Mountains and in southern California.

The following men were appointed on the Committee on Arrangements for the Fifth District Medical Society meeting to be held in Brazil early in the fall: Publicity, Drs. Elliott and Hawkins; Entertainment, Drs. Hollingsworth, Dilley, Cook, Weaver, Williams, Pierce and Pell.

Adjourned.

G. W. FINLEY, Secretary.

CLINTON COUNTY.

The Clinton County Medical Society met in regular session June 2, at the office of Dr. I. C. Lambert, Colfax. Papers were read by Dr. Goethe Link and by Drs. Hamer and Thorborn. Dr. A. H. Coble, of Frankfort, gave a talk on diseases of the eye. At the close of the scientific meeting the society adjourned to an elaborate banquet at the Odd Fellows' Hall. Twenty-four members were present.

Adjourned.

W. J. FERNALD, Secretary.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held May 30. A motion was unanimously carried that the society endorse for the State meeting a paper read by Dr. G. W. Anglin, Warsaw, at the February meeting, entitled "Pathology, Symptoms and Treatment of Burns, with Case Report."

Dr. C. N. Howard, Warsaw, gave a talk on "X-Ray Pictures." In the discussion Dr. McDonald, Warsaw, brought out the point of the superior value of a picture to fluoroscopic examination. Dr. F. J. Young, Milford, spoke of the coil as being better for picture work, but said that the static machine can be utilized for other things in addition to the x-ray work.

Dr. N. A. Cary, Silver Lake, read a paper on "Medical Gynecology in Country Practice." Dr. C. E. Thomas, Leesburg, discussed the subject "Dysmenorrhea." In the general discussion, Dr. W. S. Leiter, Claypool, spoke of the advance which has been made by the country physician in gynecology. Dr. J. W. Heffley, Mentone, called attention to the impoverished condition of the blood as an important etiological factor in many cases of dysmenorrhea. Dr. W. H. Hines, Warsaw, said that a number of cases can be relieved by tonic treatment. Some of these patients cannot spare the blood, and therefore Nature tries to

save her from that loss. On the other hand, he pointed out that it is usual for women to menstruate and when they cannot they suffer, even though it tends to conserve their vitality. Dr. Hines also referred to the etiological rôle which is played by displacements in some cases of dysmenorrhea. President Yocum spoke of the need of determining whether medical or surgical help is needed in these cases. Dr. C. C. DuBois, Warsaw, said he felt sure that some of the slighter operative procedures necessary in gynecology could be successfully performed by the country practitioner. Dr. Young spoke of the dysmenorrhea which sometimes follows the condition of infantile ovaries, hardened capsules of the ovaries, contracture of the internal os and occlusion of the os.

Adjourned.

C. NORMAN HOWARD, Secretary.

(Meeting of June 28.)

The June meeting was held on the 28th ult.

A letter was read from Dr. T. C. Kennedy, President Indiana State Medical Association, regretting his inability to be present as he had expected.

Motion carried that the Committee on Public Health and Legislation be requested to report to the society on the subject of a National Department of Health, with such recommendation as they deem best as to any action which they consider it would be well for the society to take.

The society had the pleasure of having three guests: Dr. David Linvill, president Whitley County Medical Society, Columbia City; Dr. Frederick G. Grisier, Columbia City, and Dr. William Scott, Hecla.

Dr. C. C. DuBois, Warsaw, read a paper on "Blood Pressure, with Demonstration of Instruments." In the discussion, Dr. Linvill thought the sphygmomanometer should be more generally used. Dr. Grisier regarded it as another instrument placed in our hands to obtain a correct diagnosis. Dr. Scott considered it of vital importance that we know something about blood pressure. "We talked about blood pressure thirty years ago," he said, "and we have known that there is high and low blood pressure. We have now instruments of precision which we did not have then."

Dr. E. E. Haworth, Claypool, read a paper entitled "Observations on Abdominal Adhesions, Post-operative." Dr. McDonald, in the discussion, expressed his belief that abdominal adhesions are not as big a bugbear as we think they are. He pointed out that it must necessarily be that cases of abdominal section are followed by more or less adhesions. In most cases, however, they do very little harm. They do harm when they produce obstruction of the bowel. Dr. F. J. Young, Milford, had frequently assisted in abdominal operations where thymoliodid had been dusted on the parts. It seemed to help reduce the tendency to adhesions. Dr. Scott considered that we sometimes rush our patients away to surgeons and neglect the methods we have at hand to improve the conditions.

"Uterine Hemorrhages" was the subject of a paper read by Dr. A. C. McDonald, Warsaw. Dr. P. G. Fermier, Leesburg, cited a case which he believed to be of neurotic origin, the patient having finally suicided. Dr. Linvill laid stress on the necessity of making a thorough examination in order to learn the true nature of the local condition, as an aid to determining the cause of the hemorrhage. Dr. Grisier spoke of the necessity of removing the cause before the cure of the patient can be accomplished. Dr. T.

J. Shackelford, Warsaw, called attention to the fact that a very small fibroid tumor, no larger than a pea, will produce a hemorrhage. He cited a case in which he had removed a small fibroid with complete cessation of a troublesome hemorrhage. Dr. C. N. Howard, Warsaw, called attention to the baleful effect the drain of a repeated or continued uterine hemorrhage has upon the highest developed tissue—the nervous system—causing melancholia and other neurotic conditions.

President Yocum closed the meeting with an expression of the pleasure the society had felt in having our guests, who in turn extended a very cordial invitation to the members of the society to join them in their meeting at Columbia City on July 5.

Adjourned. C. NORMAN HOWARD, Secretary.

PIKE COUNTY.

The Pike County Medical Society met in regular session at the office of Dr. J. W. Coleman, Petersburg, May 12. Minutes of previous meeting read and approved. Dr. Coleman read a very instructive paper on "Alcohol; Its Uses and Abuses in Medicine." Dr. E. S. Imel read a paper on "Hygiene and Sanitary Science."

Adjourned. E. S. IMEL, Secretary.

(Meeting of June 9.)

Society met in regular session June 9, in Petersburg. Meeting called to order by Vice-President Rice. Minutes of previous meeting read and approved. Dr. J. R. Rice read a paper on "The Ethics of the Profession," and gave as his opinion that the reason the medical profession was treated with less respect by the laity than formerly was due to the fact that this attitude was tolerated by the profession rather than resented. Dr. J. T. Kime read a very able paper on "Brain Injuries," giving the differential diagnoses of various conditions after injuries. W. R. Davidson, of Evansville, gave a talk on medical organization. Following the scientific session the members and their wives adjourned to a banquet.

Adjourned. E. S. IMEL, Secretary.

SPENCER COUNTY.

The Spencer County Medical Society met at Christy, Ind., June 21, with President DeTar in the chair. Dr. J. P. Coultas read a paper on "Things Observed in the Insane Hospital," stating that the patients were well cared for, both as regards food and clothing and outdoor amusements. Dr. G. F. Adye gave an interesting talk on "Be Sure You're Right, then Go Ahead," concluding that when a certain treatment was indicated the thing to do was to give it. A number of cases were reported which were of much interest.

Adjourned. H. Q. WHITE, Secretary.

BOOK REVIEWS

PROGRESSIVE MEDICINE. Vol. II, June, 1910. Quarterly, by H. A. Ilare, M.D., assisted by L. F. Appleman. Pp. 363. Paper. Price, \$6 per annum. Lea & Febiger, Philadelphia and New York, Publishers.

As usual, Coley's opening article is extremely full and contains an interesting discussion on the relation of accident to the production of hernia. This question

so often comes up in surgical practice that authoritative data on either side are welcome.

Clark's section on cancer of the uterus, and the review of Wilson and MacCarty's paper on the relation of gastric ulcer to carcinoma are quite exhaustive.

Pernicious anemia, exophthalmic goiter and diabetes mellitus are given considerable space in Stengel's section. Exception might be taken to the author's statement that hemolytic tests previous to transfusion in hemophiliacs are essential. This is not in accord with the latest and best teaching.

The volume closes with Jackson's section on ophthalmology.

MODERN SURGERY: GENERAL AND OPERATIVE. By J. Chalmers DaCosta, M.D., Professor of Surgery and of Clinical Surgery in the Jefferson Medical College, Philadelphia. Sixth Edition, Greatly Enlarged. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$5.50 net; Half Morocco, \$7 net.

Dr. DaCosta's book, for some time past considered the best single volume of the standard works on surgery, does much to impress one with the real progress that is being made in surgery. Almost every section has been altered and added to.

Among the subjects of particular interest are arteriorrhaphy, arterio-venous anastomosis for transfusion of blood, operative treatment of recent fractures, intrathoracic surgery, decompression operation, thyroid surgery, immunity and the use of sera and bacterial vaccines.

The inclusion of Rosenberger's method of diagnosing tuberculosis by finding the bacilli in the blood, the reliability of which has been much questioned, gives support to the positive results reported.

Notwithstanding the concise and brief presentation of each subject, the book is attaining to a considerable size, and there is no doubt but that it will soon be necessary to divide the subject-matter into two or more volumes.

DISEASES OF THE STOMACH AND INTESTINES. By Robert Coleman Kemp, M.D., Professor of Gastro-Intestinal Diseases, New York School of Clinical Medicine. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$6 net; Half Morocco, \$7.50 net.

Coming from one who for a number of years has devoted much time and careful attention to this division of medicine, this volume will be received with interest. The opening chapters cover the anatomy and physiology of the stomach and intestinal tract. A very instructive portion dealing with the examination of the patient precedes the actual chapters on methods of examination and treatment of the stomach. The remainder of the book, Part III, is devoted to intestinal diseases, the last chapter being an exposition of diseases caused by various intestinal parasites.

The chemical tests are clearly and correctly described, with concise methods for performing each. Therapeutic measures given are adequate and practical.

The inclusion of typhoid fever helps to make the volume more complete. Recent additions to the subject of diverticulitis and intestinal parasitic diseases also add much to the value of the book.

With the exception of some rather crude illustrations the volume is a comprehensive treatise on the subjects considered.

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ORIGINAL ARTICLES

THE INTER-RELATIONSHIP OF GALL-STONE DISEASE AND APPENDICITIS.*

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INDIANAPOLIS, IND.

The following abdominal case came under my observation with masked symptoms, and three different diagnoses were made by three different physicians, and each was partially right.

On September 30, 1909, I was called in consultation with the family physician in a neighboring city to see Mr. G. R. M., age 54; occupation, cashier in a bank. As no chart had been kept by the nurse, I was compelled to rely entirely upon the memory of the attending physician and family for any preceding symptoms, as well as for a record of his pulse and temperature. Respiration was shallow and slightly increased above normal; mind was clear; perspiration was apparent on face; complexion sallow but not jaundiced; temperature, 98.2; pulse, 84, and though regular was quite weak; the lungs and heart were normal; examination of the abdomen showed a normal contour; percussion gave an empty stomach, intestines empty except the lower part of the descending colon, and a dull percussion note in the right inguinal region: deep pressure was made on the right upper quadrant during forced respiration without any pain being elicited; deep pressure over McBurney's point made patient flinch. A mass seemed to be present in the right inguinal region without any defined boundaries and of fairly soft consistency; remainder of the abdomen was negative; there were no painful spots along the spine. Urinalysis negative. Several blood slides were taken,

which showed an increase of polynuclear cells. The history, as given by the attending physician, follows: Four days previously patient had had a severe headache, some nausea and vomiting; later he complained of indefinite pains in the abdomen and general abdominal tenderness, but no localization of the pain. This continued for two days, his headache being exceedingly severe and the pain in the abdomen being greater and the attending physician not being available, another physician was called in, who gave him a hypodermic of morphia, either one-fourth or one-half grain, sufficient, however, to relieve his suffering and also to render him constipated, his stools previous to this having been regular. During the next two days his pain became less, though his weakness increased markedly; further questioning of the family gave the information that ten years before he had had a severe headache, followed by a severe pain in the abdomen, was nauseated and vomited repeatedly, had general abdominal tenderness but no localized pain, was enemic but not jaundiced, with slight eruption on the face: after a rest in bed for a couple of weeks he recovered. Each year since then he had a similar attack with the same symptoms and the same recovery; he would often have severe headaches between attacks and the headache seemed to give him more trouble than the abdominal distress; his appetite was always poor and he would commonly be called a spare man, weighing about 135 pounds.

He had discussed his case with several physicians, some of whom advised him to have an exploratory incision made, but as his family physician did not so advise him, he would not consent to it; he had at no time passed any gall stones. His family physician informed him that he probably had had gall-stone disease. I believe him to be suffering from chronic appendicitis with abscess formation and with a possible involvement

* Read before the Indianapolis Medical Society.

of gall-stone disease. As his heart was very weak I ordered heart stimulants, small doses of calomel often repeated and sufficient enemata to unload the bowels. Conditions being unfavorable for an operation at home and his condition being too bad to allow a removal to a hospital, fifty miles away, and as he had nine or ten of these same attacks before, I advised nourishment and stimulants until he was sufficiently strong to be moved to the hospital. On the second day after my visit I took with me Dr. George J. Cook, of Indianapolis, who made a careful examination of the patient. At this time we found the temperature slightly subnormal; pulse, 72, very weak; abdomen moderately distended; Dr. Cook was unable to elicit any pain from the right inguinal region, indeed the patient had no pain at all; he seemed to be prostrated and short of breath; there had been no movement of the bowels since my for-

tive interference, yet both agreed that it would have been futile with such a weak heart. We both advised operation if the patient became strong enough to be moved to a hospital.

Autopsy.—The findings of the autopsy which was made within a few hours by myself, assisted by two local physicians, was, first, an enlarged gall bladder filled with numerous stones, as is hereby shown; second, a perforated appendix partially gangrenous, adhering to the cecum and buried under an abscess cavity in which there was probably twelve or fourteen ounces of pus; third, an occlusion of the bowel formed by the walls of the abscess, as well as by the exudation of the inflammation. The tissues surrounding the appendix were massed together and it was exceedingly difficult to remove the appendix at all, the inflammation having been so severe.

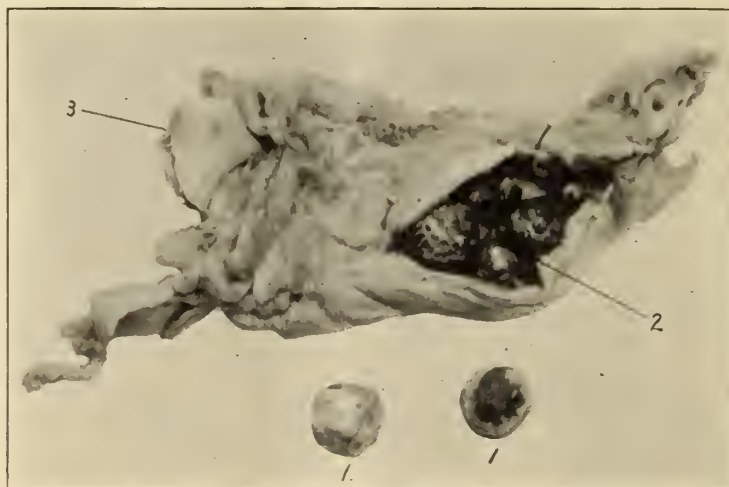


Fig. 1.—Gall Bladder. 1. Gall stones removed from the gall bladder. 2. Numerous gall stones in situ. 3. Distal end of gall bladder.

mer visit excepting by enema, which brought forth a brownish flocculent material. Dr. Cook's diagnosis was obstruction of the bowels and while there gave the patient a high enema of glycerin, castor oil and warm water, instructing the nurse to repeat this at intervals. The next day, although I found the patient a little better, the bowel movement had been from the enema only. At Dr. Cook's suggestion an ounce of alboline oil was given every hour; the pulse was very weak. The following night I found the patient in *extremis*, abdomen enormously distended, pulse barely perceptible and the patient rapidly lapsing into unconsciousness and expiring shortly after I entered the room.

His sudden death showed that little vitality was present when Dr. Cook and I made our examination, and though we both discussed opera-

As this case had shown complex symptoms as well as the absence of symptoms and as appendicitis seemed to be the real cause of death, although the gall stones must have been present for a long time, and as the case had been diagnosed for ten years as gall-stone disease, I was interested to know what the experience of others had been in similar cases. With this end in view, I briefly detailed this case to a number of the leading diagnosticians and abdominal surgeons in the United States, whose replies I will shortly give. It had seemed to me that there was a relationship between the appendicular disease and the gall-stone disease. To get at this matter rightly it is necessary to show how the two diseases originate, their simple symptoms, their complex symptoms, the symptoms of the two when concurrent.

Stengel, in Osler's Practice of Medicine, gives the simple symptoms of appendicitis, first, pain, which is primarily diffuse and then localized in the right iliac region; second, rigidity of the abdominal walls; third, nausea; fourth, constipation; fifth, chills; sixth, fever; seventh, acceleration of the pulse. He reminds us, however, that little importance is to be attached to the fever and accelerated pulse. Taking that as the classical symptomatology we may turn to Moynihan in his "Gall Stones and their Surgical Treatment" for the simple symptoms of gall-stone disease. You will notice the similarity of the symptoms to appendicitis, first, pain localized



Fig. 2.—Appendix. 1. Opening into the cecum. 2. Toothpick running between perforation above and gangrenous opening below where appendix was torn loose from abscess wall. 3. Portion of the abscess wall.

and referred; second, nausea; third, jaundice, which he states is rare; fourth, fever; fifth, tumor, which is also rare. He states that the referred pain is usually in the right subscapular region, rarely the left; or in the neck, down the arm or in the epigastric region; he also laconically remarks, "the most common symptom is indigestion." That is in line with A. O. J. Kelly, in Osler's Practice of Medicine, who states that the simple symptoms of gall-stone disease are but two—first, chronic indigestion; second, gall-stone colic.

In regard to the special symptoms of appendicitis may be mentioned Widmer's sign, in which

the right axillary temperature is distinctly higher than the left; Morris' tender point is one and one-half inches from the navel in a line drawn from the navel to the anterior superior spinous process of the ilium. If deep pressure be made at that point over the lumbar ganglia on both sides and tenderness is found it indicates pelvic trouble; if the right side alone, appendix trouble. Head's areas of tenderness are three in number: first, beginning at the back, close to the middle line at the eleventh dorsal vertebra and running to the right, a narrow band sloping slightly downward, the lower edge at the crest of the ilium; second, a triangular area bounded below by Poupart's ligament, above by a line drawn out from the umbilicus and to the inner side by a line just to the right of the middle line. Its apex is at the anterior superior spine of the ilium; third, a circular area just below the center of a line joining the anterior superior spine of the ilium and the umbilicus. Tenderness in any of these points is presumed to show appendicitis. The Rovsing-Chase sign is made by deep pressure, beginning at the left over the descending colon and following its course upward and across the transverse colon and down the ascending colon, endeavoring to press the gas in the bowel toward the cecum. Distention will be produced if inflammation of the cecum or appendix be present, giving sharp pain in the right iliac fossa. Blumberg's sign is pain upon deep pressure over the appendix and shows inflammation limited to appendix; pain upon removing the hand after the pressure means peritoneal involvement. Illoyay's manipulation is the forcible flexion and extension of the right leg and thigh when the patient is lying on the back, causing pain in the right iliac region. Sonneburg's test is the administration of castor oil on all patients with the appearance of simple catarrhal appendicitis. If they don't get better within twenty-four hours then operate. Many pathologists speak of the importance of the blood count in appendicitis and especially the relative number of polynuclear cells, although Gibson states that the differential blood count and its relation to the total leukocytosis is of value chiefly in indicating fairly consistently the existence of supuration and gangrene. It is of more frequent value in the interpretation of the severity of the lesions of appendicitis and their sequelæ. Wilson remarks that the diagnostic importance of blood counting may be readily over-estimated and Murphy states that blood count is only corroborative. The summing up of the symptoms of appendicitis was made by Mynter when he said that few diseases present so many stages, each char-

acterized by a different set of symptoms, while on the other hand every one of these cardinal symptoms may be absent or if present may indicate other affections.

The special symptoms of gall-stone disease might be headed by Boas' sign, who states that it is always present, namely, pressing the fingers on a point to the right of the tenth dorsal spine a painful area is elicited, which extends from one inch external to the spine of the tenth dorsal vertebra laterally to the posterior axillary line. The characteristic and most constant sign of gall-bladder hypersensitiveness, according to Murphy, is the inability of a patient to take full inspiration when the physician's fingers are hooked deep beneath the right costal arch below the hepatic margin. Abraham's special symptom is a painful point midway between the umbilicus and the costal cartilage of the ninth rib in the right hypochondriac region. Douglas tells of a definite point of tenderness at the tip of the tenth rib. Mayo Robson indicates the special diagnostic sign as pain upon pressure over some point of a line drawn from the ninth costal cartilage to the umbilicus. On the other hand, Waterhouse shows that a considerable number of cases of gall-stone disease have no symptoms or, as he qualifies it, "perhaps I should say none recognizable by the medical attendant."

Concurrence of gall-stone disease and appendicitis is not uncommon to many diagnosticians. The bacillus coli is found in both an inflamed gall bladder and in an inflamed appendix. Staphylococcus pyogenes aureus is found in both in some cases; hence the same infection should produce the same symptoms whether in the appendix or gall-bladder, and as but a few inches of space separate the two and the connection between the two transmits infections easily, it will be readily seen that a relation between the two diseases can exist. Symptoms in such cases must necessarily be the profound symptoms of an abdominal infection more serious than when the diseases be present separately. Pain localized in separate diseases becomes diffuse. Tenderness which may be marked at first may be lessened later, on account of the profound prostration caused by the severity of the infection, the senses having been dulled so that the patient may not apparently have any pain or tenderness as in the case given above. The pulse, which may have been rapid, may drop back to normal, but is thready and weak, chills and rigors with perspiration may continue on account of the pus formation. Jaundice, as Mayo states, has no part in the diagnosis of gall-bladder stones and when present means a complication. Rigidity should

continue throughout the course of the disease. Vomiting, which may have been present at the beginning of either disease, may continue throughout, even to fecal vomiting; constipation is very obstinate and may lead to complete obstruction as in the foregoing case. Distention occurs in both, but more in appendiceal cases. It becomes extreme as the general peritoneum becomes involved and is one of the gravest symptoms of general peritonitis, although as Kelly states, the abdomen may be flat, hard and board-like or soft and natural even in severe diffuse peritonitis; he also remarks when this disease is accompanied by perforation, there is an exceedingly large extravasation of septic material which causes sudden excruciating pain, followed by symptoms of shock. The violent impression made upon the great nerve centers, causing collapse, is a sign common to all acute disorders within the abdomen, according to Treves. He cites a case of a middle aged man, seized with pain in the hepatic region; rise of temperature, jaundice supervened, the patient dying within two weeks. The liver was found to be filled with abscesses, the appendix was disorganized and filled with pus and it had been the seat of a long standing disease. Intestinal obstruction is given as a common symptom or termination of both gall-stone disease and appendicitis. Kelly, in Osler's Practice of Medicine, speaks of the pain of cholecystitis being referred downward to the right lower quadrant, suggesting appendicitis, that as a matter of fact the two may be concurrent and Stengel, in the same work, declares "the pain of cholecystitis may be referred to the lower right quadrant of the abdomen and whatever tenderness there may be is most decided in the same region. The symptoms of onset might be practically the same as appendicitis. On the other hand, in cases of appendicitis the pain may be referred to the region of the gall-bladder or when the appendix lies posterior to the cecum it may be more marked in the back, posterior to the liver." Moynihan tells us that appendicitis is not uncommonly associated with gall-stones. In rare cases he states that gall-stone colic may be mimicked by appendicular colic. In a certain, perhaps not inconsiderable, number of patients a recent attack, one among a series, may have been experienced as a precursor of gall-stone colic.

I now wish to combine with the opinions of the above authors as given in the literature on the subject, the opinions of a number of competent men in personal communication to the author. To each one of these the following questions were propounded: 1. Do you find that ap-

pendicitis and gall-stone disease are inter-related? 2. If so, what per cent. of gall-stone disease have an inflamed appendix, or *vice versa*? 3. Have you any special diagnostic symptoms for gall-stone disease? 4. Have you any special diagnostic symptoms for appendicitis? 5. Would any new symptoms be present if a patient is suffering from both gall-stone disease and appendicitis? 6. Would any of the usual symptoms of gall-stone disease be modified or wanting by a concurrent appendicitis or *vice versa*?

The answers to these questions are as follows:

DR. GEORGE W. CRILE, Cleveland, Ohio: I find both diseases at the same time in a small minority of cases. I cannot quote per cents. I have only the classical symptoms for the two diseases. Speaking of the symptoms of the concurrent diseases, it would depend upon circumstances, that is, if the appendicitis is severe and the gall-stone mild then the very prominence of the symptoms would overshadow them; there are, of course, many exceptions.

DR. CHRISTOPHER GRAHAM, Rochester, Minn.: Answers yes to the question of the inter-relationship of appendicitis and gall-stone disease, places the per cent. as 10 per cent. in men and 5 per cent. in women. Not necessarily any new symptoms present, would depend on previous history and the findings at the examinations.

DR. JOHN B. DEAVER, Philadelphia: Yes to the first question. I am unable to give the per cent., but several cases have occurred in my experience. The special symptoms for gall-stone disease are flatulence with distress shortly after eating, relieved partially by belching and entirely by vomiting, pain more likely to occur during the night, the longest time after digestion, tenderness on deep pressure at the right costal margin and occasional pain or discomfort in the right shoulder, back, etc. The special symptoms for appendicitis, a patient previously well, suddenly seized with acute abdominal pain referable to the umbilical or epigastric region, followed by nausea and vomiting, and all these followed by pain referred to the right abdominal quadrant with rigidity of the abdominal muscles overlying the appendix and tenderness upon pressure. In regard to the new symptoms, "not necessarily so, as acute inflammation of the gall-bladder may be simulated by acute inflammation of the appendix holding a high position and *vice versa*, but must be governed by previous history." In regard to the modification of symptoms he says, "not the symptoms of long standing gall-stone disease but those continuing after the prodromal symptoms."

DR. MAX EINHORN, New York City: Appendicitis and gall-stone disease are not inter-related. No per cent. given. In gall-stone disease the liver is somewhat usually swollen and pain radiates to the back and right shoulder blade. In appendicitis pain at McBurney's point, extending rather downward from the right lumbar quadrant and through the right limb, liver not swollen. If there would be a combination of the two diseases, the severity of one affection may mask the symptoms of the milder disease.

DR. AUGUSTUS CAILLE, New York City: In answer to question one, no, but they may have the same origin, i. e., infection from the colon. Gall-stones form after the gall-bladder becomes affected. Per cent. unknown. The special diagnostic symptom for gall-stone disease is pain when the edge of the hand is forced upward under the border of the ribs; the usual symptoms are described in books. The special diagnostic symptoms for appendicitis are pain and discomfort by direct pressure upon the appendix; without feeling the appendix, diagnosis would be nothing but guesswork. With both diseases present the symptoms would be a combination of both conditions. The case you cite was too far advanced to make a differential diagnosis between gall-stone disease and appendicitis easy. At an early stage, before abscess formed, the differential point could have been brought out by a careful examination or exploratory incision.

DR. JOHN H. MUSSER, Philadelphia: Appendicitis and gall-stone disease are not inter-related but may be co-incident in chronic or subacute cholecystitis and appendicitis. Do not know per cent. No other special diagnostic symptoms for gall-stone disease than those given by the best modern authorities. The answer to the question, have you any special diagnostic symptoms for appendicitis is "Some." Answers no to the question in regard to new or modified symptoms of the two concurrent diseases; he states it is important not to confound gall-stone disease and cholecystitis. He also writes a note on the letter sent him in regard to the foregoing case, asking the question, "Would it be chronic appendicitis or an acute attack on top of a chronic inflamed appendix?"

DR. CHARLES M. FOX, Chicago: Appendicitis and gall-stone disease are not inter-related. Merely the same per cent. for gall-stone disease without involvement of the appendix. The special diagnostic symptoms for gall-stone disease: (a) history of an acute attack followed by (b) tenderness in the gall-bladder region, and (c) referred pain to the right shoulder-blade, jaun-

dice only in small per cent. of cases, 10 to 15 per cent. The special diagnostic symptoms for appendicitis are: (1) pain; (2) nausea, vomiting; (3) local tenderness not affected by bimanual examination of appendages usually; (4) temperature, this I do not find constant, in some severe cases temperature has not been marked. Answers no in regard to new symptoms of concurrent diseases. There might be some confusion early in the attack when the abdominal pain was diffuse. These answers are not based wholly on my own experience, but also that of Dr. Schroeder. Personally I have felt, for some time, that the relation of chronic appendicitis and gall-bladder disease was only accidental. I have seen several cases operated on for appendicitis with subsequent gall-bladder disease, but have felt that the gall-bladder was at fault in the first place.

DR. FRANK BILLINGS, Chicago: 1. Appendicitis and gall-stone disease are not inter-related but may occur in the same individual. 2. I do not know in what percentage of cases the two conditions co-exist. 3. I have no special diagnostic symptoms of gall-stones. Usually the condition is easily recognized if due attention is paid to the history of the patient's life, former illnesses, especially infection and the symptoms of the present one. 4. I have no special diagnostic symptoms for appendicitis. 5. I do not think that new symptoms would be present in a patient suffering from both gall-stone disease and appendicitis but a combination of both diseases in the same individual may present a state of confusion to one who does not carefully separate the one condition from the other. 6. Is answered by No. 5. One must not forget that practically the same nervous mechanism is involved in an involvement of the appendix, the gall-bladder, the pyloric end of the stomach and duodenum and right kidney so that the referred superficial pain and disturbed function of the gastrointestinal tract may be present in an involvement of any one of these organs. One, too, must not forget that the appendix may point and be located near the gall-bladder or the kidney and the symptoms be mistaken for kidney-stone or gall-bladder disease. That perforating duodenal ulcer with subphrenic abscesses may be mistaken for appendicitis with abscess or for gall-stone disease. I have seen and diagnosed cholecystitis with gall-stones, appendicitis and right kidney stone in the same individual at the same time.

DR. JOHN DUDLEY DUNHAM, Columbus, Ohio: Appendicitis and gall-stone disease are occasion-

ally inter-related: 20 per cent. of cases. No special diagnostic symptoms for gall-stone disease and the usual ones for appendicitis. If the diseases were concurrent there would be rather a masking of symptoms of both, nor would the symptoms be modified. He states that the appendix should always be removed when the abdomen is opened. Illustration: Man, 32 years, history, ulcer of the stomach with hemorrhages over four years' time; operation, stenosis-pyloric, large non-malignant scar removed with pylorus, gastrojejunostomy; uneventful post-operative history for twelve days, then fever, pain, peritonitis, death in four days more. Post-mortem: Operative field perfectly healthy, anastomosis healed; acute gangrenous appendicitis, pus, etc.

DR. CARL BECK, New York City: I would not hesitate to send you my answers, if it were not for the reason that I feel that I do not fully understand the questions. You have apparently entered on an interesting but difficult field. I send you a pamphlet of mine, which answers some of your questions. The pamphlet sent is on Cholelithiasis, reprinted from the *New York Medical Journal* of Sept. 8, 1906.

DR. ALBERT J. OCHSNER, Chicago: 1. I believe there is a definite relation between gall-stone disease and appendicitis, the former being due to an infection from the latter or possibly both, due to some infection from the alimentary canal. 2. I have found in somewhat over 50 per cent. of cases suffering from gall-stone disease that the patient had had at some time a severe appendiceal affection. 3. Pain upon pressure over Mayo-Robson's point; over Boas' point; extension of pain to the right in the back along the tenth rib; hyperchlorhydria, particularly after eating, and more particularly after taking acids of any kind. 4. Aside from the recognized symptoms of localized pain, rigidity of muscles, nausea, constipation, etc., Robert Morris' sign is usually present, i. e., tenderness over the point of the right lumbar ganglia. 5. These cases usually have all the symptoms for both diseases. 6. I believe not.

DR. ROBERT T. MORRIS, New York City: The quotation of your case of gall-stones associated with appendicitis and abscess, and the result of consultation is precisely similar to one which I had recently. One surgeon had made a diagnosis of gall-stones. Another had made a diagnosis of appendicitis, and I was called in to settle the question and was asked to do the operation. The gall-bladder, several inches long and containing a large number of gall-stones, was completely adherent to an appendix which had perforated and formed an abscess. This, however, does not

lead me to ask questions in just the way you have put them, but I will answer yours, *seriatim*.

1. Appendicitis and gall-stone diseases may often occur as a matter of co-incidence, because both diseases are so common. In some cases we assume that either one condition might be secondary to the presence of the other, for the reason that both are largely due to the action of the colon bacillus, and if we have a very active colony of colon bacilli at work in the appendix, a secondary acute cholecystitis can easily enough be set up as a complication, and *vice versa*.

2. I have no data on the proportion of cases in which both conditions are found together, and am pretty sure that I would have seen such statistics had they been published by any one in volume.

3. There are no special diagnostic symptoms for gall-stone disease. We must get at the diagnosis by exclusion.

4. A special diagnostic symptom for appendicitis will be found in the reprint, which I am sending you under separate cover. In this reprint, reference to the point is made in connection with fibroid degeneration of the appendix, but it has a bearing of special value in infective appendicitis.

5. The only new symptom if a patient were suffering from both conditions is the one contained in the reprint.

6. There would be a modification of symptoms of each disease in a case with both occurring simultaneously, but such modification would lead to confusion rather than to a clear diagnosis. Concerning my case recently quoted, in which both conditions were present in acute form, I state that we had sufficient cause for determining the question by operation. I am opposed to taking this position as a rule and am a stickler for the most correct diagnosis possible in advance of the operation.

The reprint mentioned by Dr. Morris, is on "Protective Appendicitis" in the *Medical Record* of Jan. 8, 1910, and he underlines this symptom: hypersensitiveness on deep pressure on the site of the right group of lumbar ganglia situated approximately, one and one-half inches to the right of the navel and close to the lumbar vertebræ.

DR. W. S. HALSTEAD, Baltimore: You will be perhaps interested in a case which I recently had under observation. The patient was quite desperately ill with stone in the common duct. She also had symptoms suggestive of appendicitis. After removal of the stone in the ductus choledochus the patient's condition was so seri-

ous that the appendix was not removed. The day following the operation a severe appendicitis manifested itself, for which operation was not performed. She was treated by posture, stomach washing and starvation and has made a good recovery. During the convalescence and while very ill, she developed severe pleurisy with effusion on the right side.

CONCLUSIONS.

From the foregoing letters as well as an investigation of literature upon the subject, I am convinced that the medical profession is about equally divided on the subject of inter-relationship of gall-stone disease and appendicitis. Five of the foregoing letters affirm it, five deny it and two undecided.

From my own investigation, I am willing to believe that there is an inter-relationship between the two diseases. And no matter how complex the symptoms, how modified or how masked, there usually are sufficient symptoms to give a guarded diagnosis and to indicate that an exploratory incision be made to complete the diagnosis.

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CYCLIC VOMITING IN CHILDREN.*

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FORT WAYNE, IND.

I desire to call your attention to a condition described by different writers under the various terms of periodical, cyclic and recurrent vomiting with acetonuria. The following case gives a picture of the condition:

D. C., female, age 7, the fourth of five children. Family history: Father, 48: always good health. When a boy had attacks similar to this attack of his daughter's. Mother always good health except for an attack of gall-stone colic. Three of patient's brothers had periodic "bilious" attacks when small.

Personal history.—This girl, while never a strong child, has never been seriously ill, except for periodical attacks similar to this one.

Present illness.—July 22, 1909, was called to see her and learned that she had been sick with pain in epigastrium and vomiting for two days. During this time she had retained absolutely nothing that was given her. Examination shows a fairly nourished, rather delicate girl with a very fair complexion. She is rather pale and inclined to be drowsy and listless. She complains of some pain in the epigastrium but does not complain of much nausea. Examination of the chest negative: no abdominal tenderness, spleen and liver not palpable. Knee jerks normal, pupils equal and react to light. Pulse, 110; temperature, 100; respiration, 24. In P. M. temp., 98; pulse, 106. She was given three grains of bismuth subnitrate every four hours, and allowed to have a little cracked ice. All food prohibited. By the next day it was found that she was unable to retain even the ice so absolutely nothing was given by mouth and rectal alimentation was begun, giving her 6 ounces of albumen water or diluted milk, together with 2 grains of sodium bromid and 2 drams of sodium bicarbonate every five hours. Urinalysis showed: Amount in 24 hours about 12 ounces, slightly acid; specific gravity, 1021. No albumen, no sugar, no bile, no indican, acetone and diacetic acid present.

Her condition gradually improved and she became brighter until July 26, on which day she did not vomit at all. During this time her temperature remained normal and the pulse ranged from 86 to 100. The next day feeding by mouth was gradually begun and she made an uneventful recovery. An analysis of the vomitus, made July 24, showed HCl, 20; total acidity, 55. A daily analysis of the urine during the attack showed the constant presence of acetone and diacetic acid and they continued to appear in diminishing amounts for three days after she began to take food by the mouth. On July 25, crystals which were morphologically (no chemical test made) leucin and tyrosin were found in considerable quantity.

In the following case the vomiting was not such a marked symptom and this was the first attack he had had.

Baby G., age 2½ years, male, only child. Family history negative. Personal history: Has been troubled with constipation since he was born. Broncho-pneumonia at 2 years. Has never been very strong.

Present Illness.—Called to see baby Jan. 24, 1910. Baby taken sick yesterday with vomiting. The child is fairly well nourished, has a very fair complexion, is quite drowsy and listless, and vomits when anything is taken into the stomach. Temperature, 98; Pulse, 100. Examination of chest negative. Abdomen negative. Spleen and

* Read before the Twelfth District Medical Society, Fort Wayne, Ind., May 17, 1910.

liver not palpable. Patellar reflex diminished. No Babinski's sign nor ankle clonus. Pupils equal and react to light. No jaundice. Examination of single specimen of urine shows specific gravity, 1028; acid reaction, no sugar, no albumen, acetone and diacetic acid present. The child was given nothing by mouth. A nutrient injection was given every 6 hours and with it 2 grains each of sodium and ammonium bromid, together with 2 drams of sodium bicarbonate. For the next two days the baby slept almost all the time, arousing only when given the injections and when he vomited. The vomiting then became less and he was able to take ice water and clear broths. The stools had become the color of putty. On January 27 the liver was palpable and he was a little brighter. In consultation with Dr. Drayer it was decided to give him, in addition to what he was getting, 1/10 grain of calomel every 4 hours and hot packs and some lemon juice. On January 28, he was still brighter and he did not vomit. A blood examination showed Hgl., 95 per cent., whites, 6,560. polym., 39 per cent.; small lymph., 49.5 per cent.; large lymph., 6.5 per cent.; eosin, 1 per cent.; transit., 4 per cent. January 29 stool contains a little color. January 30 stools greenish yellow; baby wants to get up. A daily urinalysis showed the presence of acetone and diacetic acid until January 30, by which time they had disappeared from the urine entirely. The temperature at no time was above normal and the pulse varied from 100 to 120. The respirations, at times deep and sighing, varied from 22 to 26.

A few fatal cases have been reported and still fewer autopsies. Northup, on autopsy, found the internal organs normal except that in two cases there was hypertrophy of the epithelium of the whole intestinal tract and a slight degeneration of the glomeruli. In recent English literature I have been able to find reports of autopsies in five cases. Griffith's¹ case showed necrotic changes in the mucous membrane of the stomach and intestines, slight parenchymatous alterations in pancreas, spleen and kidneys, and fatty infiltration of the liver.

Langmead² says: "There was nothing definite post-mortem, which could not be attributed to inanition and fever. The large size of the liver and extreme fatty changes were, however, very suggestive."

Swain³ reports two cases from the surgeon's standpoint. In his first case, a child of four years vomited 12 days. Exploratory incision showed

only congestion of the small gut and enlarged mesenteric glands. The child made a rapid recovery. In the second case, a child of five years had vomited for six days, then complained of slight abdominal pain. An exploratory incision showed enlarged mesenteric glands as in the first case. The child died. A post-mortem showed only enlarged glands and a fatty liver.

Meyers⁴ case showed as the only pathological finding a fatty metamorphosis of the liver.

Jones⁵ reports as finding in her case enlarged mesenteric glands, advanced fatty change and round cell infiltration of the liver, and a large deposit of pigment in the kidneys.

The attack usually occurs in perfect health, though at times there may be short prodromata, such as slight fever or malaise. Sometimes the paroxysms are ushered in by other diseases, such as angina, measles, or diphtheria. The most favorable age is from 2 to 8 years, cases before or after these ages being rare. The intervals between the attacks vary from a month to a year. The chief symptom is the persistent vomiting, without much nausea and with little effort. A sup of ice water will be as quickly rejected as food or drugs. The vomiting first consists of food, then mucus and in severe cases blood. The extreme listlessness and tendency to sleep are noticeable. The body temperature may vary from normal to highly febrile. The respiration is somewhat quickened and occasionally assumes the type of the so-called acid respiration seen in diabetic coma. The stools are usually reduced in number and at times clay colored. Swelling of the liver can sometimes be made out and at times there is jaundice. An examination of the scanty, concentrated urine shows the constant presence of acetone, occasionally diacetic acid, oxybutyric acid, acetic acid, or albumen are found. Acetone is often present for a time after the attack. The attack usually ends rather abruptly in from 3 to 10 days and the little patient regains his normal condition quite rapidly. Exceptionally the attack ends fatally.

As to the cause of this condition much divergence of opinion exists among recent writers. Fishl emphasizes the hysterical character of the affection and supports the contention by the fact that the disease appears most frequently among the better classes, and that a nervous heredity is often demonstrable. However, he does not give a satisfactory explanation for the occurrence of the acetone.

Holt, Comby, and Rotch regard the paroxysms as an expression of the uric acid diathe-

1. Am. Jour. Med. Sc., 1900.

2. Brit. Med. Jour., Feb. 18, 1905.

3. Brit. Med. and Chir. Jour., 1906.

4. Arch. of Ped., xxv, 104.

5. Arch. of Ped., xxvi, 446.

sis, the explosions being due to faulty metabolism.

Krotkow assumes a pseudomeningitis produced by disturbances of digestion. Kerley believes the attack to be of rheumatic origin. Rochford holds that a functional incompetency of the liver is the all important factor. The majority of writers, including Edsall and Freund, of Breslau, believe the condition due to a disturbance of the intermediary metabolism, resulting in an acid intoxication. This view is certainly strongly supported by recent investigations of experimental acid intoxications.

Walter found that after administering hydrochloric acid to dogs, about three-quarters of it was neutralized by ammonia in the body, while most of the remainder went to raise the acidity of the urine and a small part apparently combined with the fixed alkalies of the blood. This last effect is serious because it diminishes the free alkali in the blood which is available for carbon dioxid transportation, and in rabbits at least, the amount of carbon dioxid in the blood may be reduced from the normal 25 per cent. by volume down to 2 per cent. as the result of an acid intoxication. Under such circumstances the plasma quickly becomes saturated with CO_2 gas and some of the latter is left to accumulate in the tissues. Since the amount of oxygen in the blood is not lessened the decrease in the oxidative processes of the body must be referred to changes in the cells, induced perhaps by the toxic action of the CO_2 . An increased excretion of ammonia occurs in this condition of acid-intoxication (diacetic acid and oxybutyric acid are excreted as ammonium compounds), but it is not the result of an increased production of this compound in the body, for large quantities of the ammonium salts of organic acids may be taken by the mouth with only an insignificant increase in their elimination in the urine. The quantity of ammonium salts in the urine is to be regarded rather as an indication of an excessive quantity of acid in the body. The ammonium normally formed in metabolism instead of combining to form urea combines with the excessive acid and is excreted by the kidneys as the ammonium salts of these acids. In some instances the origin of the abnormal acidity is readily determined, mineral acids may be taken by mouth either accidentally or with suicidal intent. In many diseases we can only surmise the excessive production of acids in the body, such as in diabetes mellitus, acute yellow atrophy of the liver, certain other diseases of the liver, pernicious vomiting of pregnancy, chloroform-poisoning, starvation, and puerperal eclampsia. This assumption is sup-

ported by the facts that excessive amounts of ammonia are found in the urine and the clinical symptoms resemble those of artificial acid intoxication; further, the symptoms of artificial acid intoxication are relieved by the administration of alkalies and the acute symptoms in many of the above-mentioned conditions are often greatly relieved by large quantities of alkalies. It is worthy of note that in the above-mentioned conditions, changes in the liver have been found at autopsy, and in the liver probably is where these intermediary metabolic changes occur which give rise to these organic acids.

Furthermore, Langstein and Meyer have investigated the excretion of acetone bodies in febrile diseases and in conditions of inanition and from these experiments one fact appears characteristic of childhood—that the disturbances of the intermediary metabolism which lead to the excretion of the acetone bodies, proceed from the same causes as in adult life but occur very much more readily in childhood.

CONCLUSIONS.

In view of the similarity of the symptoms and post-mortem findings in cyclic vomiting to the symptoms and post-mortem findings in certain conditions, experimental and clinical, recognized as acid intoxications, we are justified in assuming that cyclic vomiting is an acid intoxication.

In both experimental and clinical acid intoxications the administration of alkalies is the rational procedure on clinical, as well as theoretical grounds, hence in cyclic vomiting the administration of alkalies in large quantities is imperative.

ANGIONEUROTIC EDEMA.*

H. O. BRUGGEMAN, M.D.

FT. WAYNE, IND.

Nature has endowed the nervous system of man with control of the blood supply to all regions. This control operates through a wonderfully complex mechanism which consists of a system of nerve ganglia in the middle coat of all arterioles; these small ganglia are connected with larger sympathetic ganglia: the sympathetic ganglia are in turn under the influence of centers in the spinal cord, and these spinal centers are regulated by an automatic mechanism in the medulla, which is under the dominion of a series of cortical centers. This complicated apparatus normally manifests its activities by constant vaso-constrictor impulses and intermittent vaso-

* Read before the Fort Wayne Medical Society.

dilator impulses. The effects of vaso-constrictor and vaso-dilator impulses are well exemplified by "the instantaneous pallor of fear and the sudden blush of shame;" here the stimuli remain within physiological limits. Profound pathological analogues of the blush and pallor are found in the enormous rise of arterial tension seen in an increasing cerebral hemorrhage and the low vascular tone and complete relaxation of the large vessels seen in shock.

There are a multitude of pathological states which can result from injury or disease of the mechanism of vascular control, but the most interesting conditions are found in those individuals who are born with unstable vasomotor centers. We find described in medical works as distinct diseases such conditions as angioneurotic edema, erythromelalgia, hereditary edema of the legs, Raynaud's disease, hydrops articulo-rum and acroparesthesia, conditions which are undoubtedly the offspring of one parent, for the fundamental factor in their pathogenesis is some congenital instability of the centers of neuro-vascular control. The members of that group of angioneuroses which is characterized by an exudation from the blood vessels, can certainly not be clearly separated from one another, but it is a remarkable fact that the intimate relationship existing between these affections was scarcely recognized until Osler's articles in the *American Journal of Medical Sciences*, in 1895 and 1904. We can roughly divide the members of this group into two classes; in the first class the exudate consists chiefly of plasma and leukocytes and as this exudate increases there results the diseases known as the exudative erythemata, factitious urticaria and giant urticaria, or angioneurotic edema; the second class differs from the first in that in the exudate the red blood cells are in excess and usually there is not enough serum to form a wheal; cases in which this occurs are labeled Henoch's purpura and simple purpura.

It is not incongruous to attribute the symptoms of these conditions to impulses from the neurovascular centers, for in known lesions of the central nervous system hemorrhagic and other exudates may occur, as for instance, Charcot's demonstration that in cerebral hemorrhage, ecchymosis may be found in the stomach, pleura and endocardium; and ecchymosis sometimes appears in the skin in locomotor ataxia. The bloody sweats which have occurred in hysteria as well as the stigmata of catalepsy and hysteria must also be the products of centric stimuli.

Angioneurotic edema is not entitled to the dignity of being called a distinct disease, still when we consider its somewhat well-defined

symptom complex which may place a patient in mortal peril and which may be mistaken for abdominal lesions requiring immediate laparotomy we must decide that it is as much deserving of a separate place in medicine as are bronchial asthma and angina pectoris.

Since the first mention of angioneurotic edema by Graves in 1848, and Quincke's valuable researches in 1882, the literature on the subject has not been particularly illuminating nor voluminous.

As I have already indicated, patients with angioneurotic edema are like poets, born and not made. Heredity seems to be the one important etiological factor. Every practitioner is familiar with families in which several members will suffer from localized skin edema upon the ingestion of certain substances, as for instance, quinin and strawberries. Not only is a tendency to skin edema inherited but typical cases of angioneurotic edema are handed down from generation to generation. Osler has traced the disease through six generations; Whiting, in the *London Lancet*, Nov. 1, 1908, directs particular attention to angioneurotic edema as a familial disease, and quotes from McDowell, who found that out of 205 cases on record, 110 were in family groups, and it is suggested that a more careful investigation of family histories would increase the proportion of hereditary cases. Ensor, in *Guys Hospital reports*, 1904, describes a family of 80 in 5 generations, of whom 33 were affected. From these cases alone the place of heredity in the etiology is made manifest.

Of the exciting causes for an attack the most potent are worry, nervous exhaustion and unusual excitement. There are a few recorded cases in which a severe mental shock was the exciting cause for the first attack; such an one is a case of Dr. McArdle's, which I saw with him within the past few days. How suggestion may be a factor in the production of a skin edema was shown a few years ago when the daily papers of a great western city were filled with accounts of a mysterious kissing bug, whose bite was followed by a swelling of one or both lips, enormously swollen lips occurred in direct proportion to the degree of publicity; finally the newspapers tired of the subject, and the death of this epidemic of hysterical edema was as rapid as had been its birth.

Attempts to fasten the blame for the symptom complex on autointoxication or some form of perverted metabolism have signally failed; it is indeed an exceptional case in which endogenous or other toxins can be shown to play any part.

Exposure to extremes of heat and cold are given as exciting causes.

In America females are more frequently attacked than males, while in England and on the continent the ratio is reversed.

Because of our lack of knowledge, the pathology can be dismissed in comparatively few words. We know nothing of the changes in the vasomotor centers and nothing of the local conditions which permit of the exudate from the vessels. The local lesion itself differs not, except in size from the ordinary urticarial wheal.

The onset of an attack may occur at any time, but it comes on most commonly in the very early morning, possibly because then vasomotor tone is normally at its lowest point. The characteristic feature of the attack is a localized edema which usually affects the skin. Some of the mucous membranes are involved in about half the cases. Any tissue, possibly even the central nervous system, may be involved. The skin swelling pits but little on pressure; ordinarily it is white, either opaque or translucent, sometimes it is yellow, others red; itching, heat, a feeling of tension or a stinging pain may be present, but these subjective symptoms are not usual. The size of the edemic area varies from a fraction of a centimeter to an enormous distention of an entire extremity. The maximum of swelling is achieved in about 2 to 4 hours and generally disappears in 24 to 36 hours. While any portion of the body may be involved, the favorite locations are the exposed surfaces. Where several parts are involved at the same time the distribution is asymmetrical. Gordon, in *American Medicine*, January, 1909, describes a unique case; his patient had recurrent attacks in which the edema was limited to the scalp, and was so extensive that he could not keep on his hat. Will, in the *Journal of the American Medical Association*, May 16, 1908, reports a case in which the patient was incapacitated and embarrassed by several attacks, in which the scrotum and foreskin swelled to elephantine size.

Severe abdominal colic is of frequent occurrence. This colic is the result of an acute edema of the gut wall; it may come on with the skin manifestations or independently. It may be accompanied by vomiting or diarrhea and the passage of blood. Local tenderness is usually absent. The pain may be so agonizing that the patient is literally doubled up. Sometimes it is more severe in certain parts of the abdomen. When diagnosing any pathological conditions within the belly these angioneurotic abdominal crises must be borne in mind, as they have been mistaken for intussusception, gastric ulcer, renal

and gall-stone colic, and the patients have been subjected to the ordeal of an abdominal section.

The following is the abstract of the record of a case which occurred in my own practice:

Miss D, age 32, seamstress, consulted me in 1906, on account of excruciating abdominal colic, from which she has suffered at irregular but frequent intervals since childhood. The pain is accompanied by marked prostration and vomiting and she states that she believes the pain would drive her mad were it not relieved by morphin. She has abstained from almost every article of diet and been treated by a large number of physicians, without relief. About 18 months before consulting me, on the advice of an attending physician, she was operated on by a local surgeon and her appendix and a part of one ovary were removed, but the operation has modified neither the frequency nor the severity of her attacks. On questioning her I elicited the fact that she has also, since childhood, suffered from occasional attacks of localized skin edema. Nothing abnormal was found on examination, except a slight secondary anemia, and scars on her neck, which are probably the relics of a tubercular adenitis. She is of a distinctly nervous type, but aside from her colics and edema she has enjoyed excellent health. Family history negative; I have seen this girl in 20 or 30 attacks of colic and I know that I have never seen any one suffer more exquisite pain.

During the colic her belly is soft, free from tenderness and distention. Overwork and excitement frequently precede the attacks. On one occasion I saw her with a hand and forearm so swollen that I thought the skin must burst from tension; another time her neck achieved a circumference equal to that of her head. She has eight or nine attacks of colic to one attack of skin edema. The skin swellings do not accompany the colic nor do they occur just before nor just after it. Treatment has been useless.

This case is a fairly typical one of angioneurotic edema of the solitary type. It is unusual because of the great preponderance of the abdominal over the skin symptoms, and because there is no existing relationship between their time of occurrence. It is not common for solitary cases to start so early in life.

Worthy of attention in this connection, although the diagnosis is not entirely clear, are the cases reported by Briggs (two of his own and two collected from the literature) in the *Journal of the American Medical Association*, Feb. 15, 1908. These cases were seized with pain like that of ruptured tubal pregnancy, but upon laparotomy the only lesion found was a marked pelvic edema.

When edema attacks the respiratory passages, danger must be anticipated. Osler states, in his *Modern Medicine*, that edema of the larynx is a

rare event, but unfortunately this statement is not borne out by the recorded cases and especially as regards those cases which occur in family groups.

To quote again from Whiting's paper of the 110 cases collected by McDowell, 30 died from a sudden obstruction to the air way. In a family of 9, spread over 3 generations, of whom 8 had the symptom complex, as recorded by Fritz, 5 died from edema of glottis. In a family of 12, spread over 4 generations, recorded by Mendal, 9 were affected with angioneurotic edema, of whom 6 died of laryngeal edema. Griffith recorded the death of a father and one only daughter from this symptom. Of Ensor's 33 cases, there was a fatal issue in 12 from this involvement of the respiratory tract. The case which I saw with Dr. McArdle has had several attacks of edema of the glottis. Edema of the glottis usually appears with tragic suddenness, and death frequently results before aid can be summoned. Herman Müller has reported a case of sudden pulmonary edema associated with a circumscribed edema of the face and considers the pulmonary trouble to have been a part of an angioneurotic edema. To my mind the existence of an angioneurosis is the best explanation for some of the cases of acute recurrent pulmonary edema, to which Riesman called attention in the *American Journal of Medical Sciences*, January, 1907. A fatal case of pulmonary edema, which I saw with Dr. Drayer, presented no other possible explanation. Paroxysmal hemoglobinuria has been described as occurring in association with angioneurotic edema.

The diagnosis of typical angioneurotic edema is not difficult; there are times when it cannot be decided whether a certain case has urticaria, purpura or angioneurotic edema and I know of no reason why we should attempt to make a diagnosis between these conditions. In the absence of skin symptoms and a family history of this affection the diagnosis of the abdominal colic may present many difficulties; the absence of fever and tenderness would tend to exclude inflammatory lesions, but in a case with colic, blood in the stools and a palpable sausage-shaped tumor in the region of the ileocecal valve, I know of no way, except by operation, in which a surgeon could be sure that he was not dealing with intussusception.

Sutherland had a case of intussusception in a patient with Henoch's purpura, which apparently resulted from hemorrhage into the wall of the gut, paralysis of that part and increased muscular contractions of the neighboring bowel; such

a condition could, of course, occur in angioneurotic edema.

As to the prognosis, complete recovery is not to be expected. As long as the edema is limited to the skin there will be no danger to life and the abdominal colics, though distressing, are not dangerous. When the respiratory tract is involved the prognosis, as to life, particularly in the family form, is bad.

From the treatment we should not expect too much. Of course, attention should be given to the general health. Every form of dietary restriction should be tried and occasional cases will recover. Many drugs have been highly lauded; Osler has recommended nitroglycerin and the nitrites; Wright, calcium chlorid and lactate; Oppenheim, quinin; Mendel, aspirin; Cassvier, menthol and camphor; Whiting, thyroid extract. Ichthyol, almost all the tonics, sedatives and intestinal antiseptics have had their advocates. At times a patient will get well while taking one of these drugs. The gastric crises, if severe, require morphin. Edema of the glottis, the one dreadful symptom, if at all severe, requires tracheotomy or intubation, and Whiting has suggested that patients who are prone to have laryngeal edema should wear an actual or potential tracheotomy tube.

Ensor obtained relief in some throat attacks by administering dram doses of the tincture of perchlorid of iron every twenty minutes.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.

MUNCIE, IND.

(Continued from page 298, vol. III.)

ADDITIONAL ALPHABETICAL LIST OF DECEASED PHYSICIANS.

ATHON, JAMES S.—Indianapolis (1811-1875). Was born in Loudoun County, Virginia, April 1, 1811, and died at Indianapolis, Oct. 25, 1875, of cerebral hemorrhage. Dr. Athon was surgeon of the Third Indiana Volunteer Regiment in the Mexican War. He was present at the State Medical convention at Indianapolis, in June, 1849, and was accredited to Charlestown. He was numbered with the pioneer physicians of Indiana, having practiced for about forty years. From Nov. 1, 1852, to Oct. 3, 1861, he was superintendent of the Central Indiana Hospital for Insane. He was elected and served as Secretary of State from 1863 to 1865. See article on "Final Illness of Dr. James S. Athon. Post-mortem Examination, and Remarks upon the Preventive Treatment of Apoplexy," by Dr. Isaac C. Walker, Trans. 1876, p. 122.

BALINGALL, GEORGE H.—Middletown (1794-1865). Born in Scotland, 1794. Educated at Edinburgh. Came to America in 1815. Practiced first in Virginia. Removed to Middletown, Ind., in early thirties; died there in 1865, aged 71 years. Acquired a competence and retired some years before his death.

BRACKEN, WILLIAM.—Greensburg (1817-1907). Dr. Bracken was born in Dearborn County, May 26, 1817, and died at Greensburg, Aug. 13, 1907. He was licensed to practice medicine by the old Fifth District Medical Society at its session in Connersville, on Nov. 2, 1836. He commenced the practice of medicine in Jackson County, Jan. 1, 1837, where he remained about two years, after which he removed to Richland, Rush County. In 1842 he moved to Milroy, in same county, where he continued to practice until the spring of 1862, when he removed to Greensburg, and continued practice until a few years before his death.

He studied medicine with Dr. H. G. Sexton, at Rushville, Indiana. He had no educational advantages, except five months in school, schools of an insufficient order even for that day. However, he continued a diligent student throughout his entire life. He was elected a delegate to the Constitutional Convention of Indiana in 1850, and at the time of his death was the last surviving member.—Leonidas L. Bracken, grandson, Muncie.

BURT, JAMES CLARK.—Vernon (1817-1875). Dr. Burt was born in Cumberland County, New Jersey, in 1817. He attended Hanover College, Hanover, Ind., and Lafayette College, Easton, Pa., graduating at the latter. His medical education was received at Jefferson College, Philadelphia.

He located in Vernon, Jennings County, Indiana, in 1842 and practiced medicine there until the time of his death in 1875. Doctor Burt was very active in religious and educational matters. He was for many years a trustee of the State Institution for the Deaf and Dumb at Indianapolis, the Vernon Academy, and for a long time was Pension Examiner.—Dr. W. H. Stemm, North Vernon.

CANADAY, W. H.—Knightstown (1821-1873). S. T., 1873, 124.

CANNON, GEORGE H.—New Albany (1852-1907). Lived and died in his native city. Was a member of the Floyd County Medical Society, and was loved and respected. Death was due to obstruction of the bowels caused by a gall-stone.

CHARLES, HENRY.—Formerly Carthage (1822-1884). Was born in Randolph County in 1822. Graduate of Indiana Medical College, 1872 or '73, but practiced in Grant County previously to that date. Was a member of the Grant County Medical Society. He was intimately associated with Drs. William and Constantine Lomax, Horne, and Meek. They all worked together professionally during the "saddle bags age." He moved from Fairmount to Carthage in 1878, and went to Kansas in April, 1884, and died there July 11, 1884. He contributed an article on "Tobacco and Its Toxic Effects." Trans., 1881, 121.—Dr. Etta Charles, daughter, Summitville.

COGLEY, THOMAS J.—Madison (1814-1895). Born near Kittanning, Pa., March 20, 1814. Began practice at Brookville in 1837. In 1853-54 studied abroad in Great Britain and France. In 1845 established himself in Madison where he continued to reside until the date of his death, Dec. 23, 1895. Became a member

of the State Medical Society in 1855, and was a vice-president of same in 1857. See Robson, p. 325.

CURRAN, ROBERT.—Jeffersonville (1806-1872). Dr. Curran was born in Pennsylvania, April 3, 1806, and died at Jeffersonville, April 6, 1872. In the spring of 1832, he located in Shelbyville, where he remained two years. Then he removed to Charlestown. In 1838 he located in Jeffersonville. In 1848 the Trustees of Indiana Asbury University, contemplating the establishment of a medical department, Dr. Curran was invited to locate in Greencastle, and assist in its organization. The invitation was accepted. On the meeting of the board it was found impracticable to consummate their plans, but Dr. Curran was elected professor of physiology in the literary department, which chair he filled until the medical department was organized, when with it he removed to Indianapolis in 1850. In 1852, failing health compelled him to return to Jeffersonville. From 1853 to 1857, he served as physician to the Indiana State prison. In 1855 he was elected to the professorship of materia medica and therapeutics in the Kentucky School of Medicine. Dr. Curran was an earnest Christian.—Abridged from "Biographical Sketch," by Dr. F. A. Seymour, of Jeffersonville, Trans. 1872, p. 133.

Dr. Curran was present at the State Medical Convention, held at Indianapolis, June 6, 1849. He contributed a valuable article to the State Society, "Nosology of the Diseases which have Prevailed in Clark County, Indiana, since 1833, with Remarks." Trans. 1872, p. 121. Vice-president Indiana State Medical Society, 1850.

DARRACH, GEORGE M.—Cumberland (1827-1910). Was born in Philadelphia, Pa., Feb. 20, 1827, and died at East St. Louis, Feb. 25, 1910. He came to Indianapolis in 1853. He was one of the early members of the Marion County Medical Society, and was present at the session of the State Society in 1860, his name appearing in the list of members. In 1860 he removed to Napoleon, where he practiced for several years, when he came back to Marion County, and located at Cumberland. During the last three years he made his home with a son in East St. Louis.

DE BRULER, JAMES P.—Evansville (1817-1874). Was born in Orange County, North Carolina, Sept. 21, 1817; died Aug. 12, 1874. His parents moved to Indiana when he was an infant and located on White River, in Pike County. At the age of 18 he began the study of medicine, graduating from the medical department of the university at Louisville, Ken. He began the practice of his profession at Rockport, Indiana, where he remained nearly twenty years. He was married Sept. 2, 1847, to Miss Sarah E. Graham, daughter of Judge J. W. Graham, of Rockport, Indiana. Their son, Claude Graham De Bruler, was their only child.

In 1858, Dr. De Bruler moved to Evansville, Indiana, where he lived until his death. During the administration of President Lincoln, he was appointed surgeon in the Marine Hospital in this city (Evansville), which position he filled for several years. When Andrew Johnson became President, without any solicitation on his part, Dr. De Bruler was appointed postmaster, an appointment he declined without taking charge of the office, preferring to give his entire attention to his profession.—Furnished by Dr. Edwin Walker, Evansville.

DE BRULER, JAMES P.—Evansville (1877-1909). Was born at Evansville, Indiana, June 25, 1877; died at San Juan, Porto Rico, May 7, 1909. Grandson of Dr. James P. De Bruler, and son of Claude De Bruler. Graduated from the Medical College of the University of Pennsylvania, Philadelphia, in 1899. He was medical officer in the Baldwin-Ziegler Polar Expedition of 1901-1902. In January, 1903, he entered the U. S. Navy; served at the Naval Hospital, Norfolk, Va., 1903-1904; on duty at naval station Olongapo, P. I., May-July, 1904; on U. S. S. Elcano August, 1904, to March 1906; was promoted to passed assistant surgeon Jan. 3, 1906; at the navy yard, Washington, D. C., Aug. 1, 1906, to Sept. 25, 1906; on duty in Bureau of Medicine and Surgery. Navy Department and additional duty at Naval Medical School, Washington, D. C., Sept. 26, 1906; on duty on board the U. S. S., Paducah remaining on duty until the day of his death.—Furnished by Dr. Edwin Walker, Evansville.

FARQUHAR, URIAH.—Logansport (1795-1872). Was born at Fredericksburg, Maryland, Jan. 5, 1795. Ten years later he moved to Wilmington, Ohio, where a few years later he began his medical studies, which he finished at Cincinnati, Ohio. After several years' practice in Ohio, he came to Logansport, Indiana, in 1836, and continued the practice of his profession until a short time before his death, which occurred Nov. 3, 1872. He never lived in Wabash.—Mary Farquhar Peters, Logansport, daughter.

Dr. Farquhar was present at the medical convention held at Indianapolis, June, 1849, and wrongly credited to Wabash, in the proceedings. At this meeting he was elected a vice-president. Strange, his first name is not given anywhere in the various transactions.—G. W. H. K.

FISHBACK, CHARLES.—Indianapolis 18—1862). In 1858 Dr. Fishback removed from Shelbyville to Indianapolis. He was a very prominent man of marked ability, although somewhat given to hobbies. He took an active part in the affairs of the local and of the State Medical Societies. On one occasion he and Dr. P. H. Jamison were appointed on a committee to apply to the Legislature for such laws as the profession needed. In speaking of him, Dr. J. says: "I found him a hard worker, persistent and strenuous, but with all of our efforts we accomplished but little."

He met his death in 1862 in a most tragic manner. Lawrence M. Vance, a prominent citizen, died suddenly after a day or two of illness of what was undoubtedly spotted fever, although it was not recognized as such at the time; it appeared later in the community. An autopsy was had and in some way Dr. Fishback punctured one of his fingers; this was followed by a virulent blood poisoning in a few days which resulted in death. He was a devoted member of the Presbyterian Church.—Dr. Frederick C. Warfel, Indianapolis.

While a resident of Shelbyville, Dr. Fishback made a valuable "Report of the Committee on Medical Education." Trans. 1859, p. 17. Also, a second report on same subject, Trans. 1860, p. 56. These reports are well worth a perusal at the present day. Was vice-president of the State Medical Society, 1860.—G. W. H. K.

GRAVIS, CHARLES M.—Martinsville (1845-1908). Was a soldier of the Civil War, and for some time a prisoner in Libby and Andersonville. He practiced medicine in Martinsville for twenty-five years.

GREEN, CHARLES H.—North Vernon (1833-1891). Dr. Green was born in Columbiana County, Ohio, Jan. 26, 1833. Began the practice of medicine at Butler-ville, Jennings County, Indiana, in 1857. In 1858 he moved to North Vernon and continued to practice until his death, June 7, 1891. He was a member of the first County Medical Society organized in the county and was a member at the time of his death, and always took an active part in the society.—Dr. J. H. Green, son, North Vernon.

GRIFFIS, ROBERT.—Middletown (1827-1909). He located in Middletown in 1853, and continued to reside there until his death, Nov. 18, 1909.

HOMBURG, CONRADIN.—Indianapolis (1798-1881). He was born November, 1798, in the Palatinat, Germany. He studied medicine at Marburg and Würzburg, and came to this country in 1826, as a political fugitive. For a time he was editor of the "Weltbote" at Germantown, Pa. In 1836 he removed to Shelbyville, Ind., where he began the practice of medicine.

In the year 1843, Judge Morrison, of Indianapolis, held court in Shelbyville in a case of alleged poisoning, in which a physician was implicated. Dr. H. was called as an expert. The whole town took interest in the outcome of the trial because both physicians were known to be enemies. Dr. H. pointed out to the court the symptoms of various poisons, and reached the conclusion that it was not a case of poisoning, and his enemy was acquitted. Then the judge arose, and extending his hand to Dr. Homburg, said: "You are a man we need at Indianapolis; come, you are welcome." At Indianapolis Dr. Homburg was the physician and friend of Morrison, Talbott and Drake families, and was a personal friend of Mrs. Sarah K. Bolton. He died Feb. 11, 1881.—Letter from Dr. Guido Bell, Indianapolis.

KERSEY, SILAS H.—Centreville (1818-1903). He was born in Guilford County, North Carolina, Dec. 9, 1818, and died in Centreville March 26, 1903. Came to Indiana when seven years of age. He was a graduate of the University of Michigan and began practice at Mt. Etna, and later removed to Lewisville, Ind. He entered the military service in 1861, and September 9 of the same year was appointed assistant surgeon of the Thirty-sixth Regiment Indiana Volunteers, and on March 20, 1862, he was commissioned surgeon of the same regiment. Later he was a brigade surgeon and was honorably discharged Sept. 19, 1864. After the close of the war he resumed practice in Richmond, later removed to Preble County, Ohio, where he practiced for twelve years, when he again removed to Centreville, where he continued to practice until a short time before his death.

KERSEY, VIERLING.—Richmond (1809-1875). Born in Guilford County, North Carolina Sept. 8, 1809, and died at Richmond, June 3, 1875. Graduate of Ohio Medical College. Began practice at Knightstown in 1838. In 1840 located in Carthage; in 1841 removed to Spiceland, where he remained a few months, when he removed to Marion, where he remained until 1844, when he removed to Milton. In 1861 he located in Richmond, where he remained until his death. Dr. Kersey was elected president of the State Society in 1866, and presided in 1867.

He contributed a number of papers to the State Medical Society: "An Abstract of the Reports to the Cambridge City Medical Association for April, 1855." Trans. 1855, 22. "This Comprises Meteorological Re-

port for 1854-5," ib. 25. "Cerebrospinal Meningitis," 1865, 57. "Cholagogues and the Indications for their use," 1866, 30. "President's Address—Physic and Physicians," 1867, 46. "Review of Biliary Function," 1868, 24. "Why Doctors Disagree," 1869, 10. "Medical Rank in the United States Navy," 1870, 133. "Case of Muscular Atrophy," 1871, 129. "Case of Obscure Disease, Probably Chronic Glanders," 1873, 19. See interesting obituary—"In Memoriam—Vierling Kersey," signed by Drs. J. R. Weist, Joel Pennington, and S. S. Boyd. Trans. 1876, 146.

LAYMAN, DANIEL W.—Putnamville (1808-1887). Dr. Daniel Wunderlich Layman was born Sept. 24, 1808, in Shenandoah Valley, Virginia, near Port Republic. His medical education was more complete than the average medical student received in those days, for he also attended medical lectures at the Jefferson Medical College at Philadelphia for one year, 1828-1829. After this one year's course at Philadelphia he commenced to practice at Port Republic and Mt. Meridian, Virginia. Dr. Layman left Virginia August, 1831. Before leaving, his uncle, George Imboden, father of Gen. John B. Imboden, gave him a very fine horse and open buggy. His destination was Terre Haute, Ind. Hearing that the country along the Wabash River was full of malaria, he first drove up to Philadelphia, in order to amply supply himself with quinin. While there he equipped himself with the necessary medicines and instruments to begin practice in a western town. From Philadelphia he drove to Cumberland, Md.; from the latter place he started west over the old National road. He remained over in Indianapolis one or two nights and was asked to locate there permanently, but the place did not appeal to him. At Putnamville, forty-two miles west of Indianapolis, his horse became lame and he was obliged to stop here until his horse recovered. Here he met his future wife, Miss Mary H. Davis Townsend, the daughter of the inn-keeper. This settled the question of his future location. He practiced medicine here from 1831 to 1887, not only in and around Putnamville, but also in the adjoining counties, namely, Owen, Clay, Vigo, Parke, Montgomery, Hendricks, Morgan and Marion. He was a man of iron constitution. During the winter season he often made use of three riding horses. Some of his trips on horse-back were quite extended. At one time he was known to ride from Putnamville to Indianapolis and return in one day, where he went for vaccines and vaccine virus, and then after he returned home rode sixteen miles in the country to visit a sick patient. His son, Mr. James T. Layman, recalls that his father often left Putnamville at 2 a. m. on horseback for Indianapolis, and returned by 2 o'clock in the afternoon.

Dr. Layman was a typical old fashioned country practitioner in every sense of the word. He was highly esteemed by the people in the community who not only called him for medical advice, but also for advice in matters other than medical. He took an active part in the affairs of the community and also was active in politics, but never allowed himself to be nominated for a political position. In fact, he once declined a nomination for Congress. He never used alcoholic beverages nor tobacco in any form. His attitude towards temperance no doubt had a great weight in influencing the community along this line. He died at Putnamville, Aug. 10, 1887.—Letter from Dr. Daniel W. Layman, Grandson, Indianapolis.

LEONARD, SOMERVELL E.—New Albany, (1804-1854). Dr. Leonard was born at Baltimore, Md., Oct. 28, 1804, and died at New Albany, Aug. 8, 1854. He was present at the medical convention that met at Indianapolis, June 6, 1849.—Miss Lydia Townsend, New Albany.

LYONS, IRA E.—Huntington (1822-1898). He located in Huntington in 1861, where he began to practice, and continued until the date of his death, Feb. 7, 1898. He was for some time a member of the faculty of the Fort Wayne College of Medicine, first filling the chair of materia medica and therapeutics, and afterwards of obstetrics. He was a native of New Castle, Delaware.

LYONS, WILLIAM B.—Huntington (1818-1899). He located in Huntington in 1851 and practiced medicine there until his death, which occurred from being struck by an engine while crossing a railroad track, on May 22, 1899.

MACLEAN, GEORGE MACINTOSH.—New Albany (1806-1886). Dr. Maclean was born in Princeton, N. J., Feb. 19, 1806, and died in the same city March 8, 1886. He graduated at Princeton University in 1824, and later as M.D. from the College of Physicians and Surgeons of New York in 1829. He began practice in Princeton, but later, 1843-6, practiced in New York City. About the first of the year, 1848, he located in New Albany, Indiana, and taught chemistry and natural history in Hanover College, Indiana, from April 1848 to April 1849.

He was professor of chemistry for a time in Cincinnati College of Medicine and Surgery. Also taught in Pittsburg, Pa., and Oxford, Ohio, as well as in New Albany. In 1857 he removed to Princeton, and retired from active professional work.—Letter from Miss Caroline Fitch Maclean, daughter, Princeton, N. J.

He contributed two papers to the Indiana State Medical Society: "Report on the Progress of Medical Chemistry," Trans. 1853, 58, and "Progress in Medical Chemistry," 1854, 51.

McCAULEY,* ROBERT.—Johnson County (1793-1842). Born near Edinburg, Scotland, Aug. 22, 1793. He was the first white man to practice the healing art in Johnson County.

He attended a boarding school in Edinburg for several years, and obtained a good education. Sometimes he had to work in order to pay his board, and in consequence of this necessity he learned the cooper's trade. He was also an athlete and became a proficient boxer. He came to America when 18 years of age, and traveled from place to place, and when in need replenished his purse by teaching school. In 1822 he came to Henry County, Kentucky. Here he fell in love with a Miss Banta, and they were married in 1824. After his marriage he displayed his adaptability to his surroundings by working for two years in his father-in-law's distillery.

In October, 1826, he and his family came to Johnson County, Indiana, and moved into a little unfinished cabin about five miles west of the village of Franklin—then a place of five or six log houses. In this whole region there was no minister of the healing art and McCauley quickly saw the needs of the community where people were stricken and dying with malaria, so he immediately assumed the task of caring for their physical needs, and soon gained their

confidence by self-assurance, native ability and the statement that he was a graduate of the University of Edinburg. The popular belief in the truthfulness of this assertion gave him much prestige, and many were the cabin hearth stories of his seven years of study in "the old country." As he left Scotland in 1811, when 18 years of age, those interested in absolute historical truth can readily see that he very likely never saw the inside of the University of Edinburg, at least not in the serious capacity of a medical student.

But in the swamps of Johnson County the people were stricken and dying, and calling for help. "Dr." McCauley boldly rode to their relief and was hailed with joy. He was needed so quickly after taking up his abode in the wilderness, that he had no time to make a door to his lonely cabin. In lieu of a wooden door a blanket was stretched over the lintels of his doorway; the winds of winter beat against it, and the wolves sniffed at its flimsy folds, while within, his wife and babies trembled with fear.

Soon he rode miles in every direction. He passed through Franklin, crossed Sugar Creek, and practiced in Shelby County, through Edinburg into Bartholomew County, along Indian Creek, and among the bold hills and wild forests of Brown County, and far westward to White River. He sometimes made trips which consumed in time two or three days. He charged very little and collected less. His neighbors for a mile or two around always paid their bills in work.

He died Aug. 14, 1842, and at the time of his death he owned nearly five hundred acres of fertile land, but very little of his wealth had been made by the practice of medicine.—Dr. R. W. Terhune, Whiteland.

"I am sure my readers will forgive me for this rather lengthy sketch. Here is a unique, early-day physician who goes "Doc Sifers" one better. Doc Sifers had had some experience:

"Durin' the army—got his trade o' surgeon there." But "Dr." McCauley, like Topsy, "just growed."—G. W. H. K.

MCCLELLAND, JAMES S.—Crawfordsville (1821-1875). He was born at Oxford, O., Sept. 3, 1821, and died at Crawfordsville, Aug. 29, 1875. He practiced medicine at the following named places in Indiana: Yountsville, Pleasant Hill, Jefferson, and Frankfort. Later he removed to Dallas, Illinois. In 1861, he enlisted in the Twenty-fifth Regiment, Illinois Volunteers, and was made Lieutenant-Colonel. Soon afterward was appointed medical director on the staff of Gen. Sigel, in Missouri. Later he was transferred to the Department of Tennessee, and made inspector of field hospitals. He received an injury in August, 1863, on account of which he was mustered out of service. He then located in Crawfordsville. In a short time, his health having improved, he again entered the service as surgeon of the One Hundred and Thirty-fifth Regiment, Indiana Volunteers. After the close of the war he resumed the practice of medicine and continued until his death. He represented Clinton County in the Legislature; and in 1856 was a Buchanan elector.—Dr. J. L. Beatty, Crawfordsville.

Dr. McClelland made an interesting report on "Trembles, or Milk Sickness."—Trans. 1854, 43. Was vice-president of the Indiana State Medical Society, 1853.—G. W. H. K.

MENDENHALL, ELIHU T.—Newcastle (1844-1908). Practiced medicine in Henry County for thirty-four years. Was a soldier of the Civil War.

MURPHY, PIERSON.—Franklin (1800-1864). Born in Fairfield Co., Ohio, in 1800. Graduate of the Ohio Medical College in 1827, and the same year located at Franklin, which at that date consisted of some half dozen families living in log houses. He was the second physician to locate in Johnson County. He encountered the usual hardships of the early, and the young physician, of primitive days in Indiana.

In 1828, Dr. Murphy, assisted by Dr. Smith, of Edinburg, performed paracentesis abdominalis by making an incision into the abdominal cavity with a thumb lancet. Then having removed the bark and pith from a small elder, this crude contrivance was used to draw off the fluid.

Dr. Murphy practiced over a vast extent of territory, and, although his charges were nominal, acquired considerable wealth. He died in 1864.—Abridged from letter from Dr. R. W. Terhune, Whiteland, Ind.

PABODY, EZRA FITCH.—Vernon (1789-1871). Dr. Pabody was born at New Lebanon, N. Y., June 20, 1789. He was a lineal descendant of John Alden and Priscilla Mullins, the story of whose courtship and marriage is immortalized by Longfellow in "The Courtship of Miles Standish." William Pabody, the fifth grandfather of Dr. E. F. Pabody, was married to Elizabeth, oldest daughter of John Alden and Priscilla Mullins, Dec. 26, 1644.

Dr. Pabody, having completed his medical education at an early age, served as "Surgeon's Mate" in a regiment stationed at Long Island during the war of 1812. Soon after he formed a partnership with Dr. Doubleday, of Binghamton, N. Y., where he remained until the year 1818, when he removed to Vernon, Jennings County, Indiana, and again entered on the practice of medicine. For years he was the only physician in Jennings and some of the adjoining counties. His circuit extended through an unbroken forest over so large a scope of country as to require a tour of several days in order to visit all his patients.

On Oct. 15, 1820, Dr. Pabody was married to Mabel Butler, oldest daughter of Rev. Chauncey Butler and Demia Butler.

Dr. Pabody organized the first Sunday School and the first Temperance Society in Jennings County and to the day of his death was deeply interested in the cause of religion, education and temperance.

Dr. Pabody served three terms as a member of the Indiana Legislature, and served as Judge of Probate and Common Pleas Courts from 1842 to 1856. He died at his home in Vernon, Feb. 3, 1871, aged 81 years and 8 months.—Dr. W. H. Stemm, North Vernon.

PARR, JOHN N.—Jolietville (1837-1909). Dr. Parr was a native of Boone County, in which he spent nearly all of his life.

RICHMOND, CORYDON.—Kokomo (1808-1906). Was born in Onondaga, New York, November 22, 1808, and died at Kokomo, October 1, 1906. He was a son of Dr. John L. Richmond. He was a graduate of the Ohio Medical College 1832, and immediately located at Pendleton, where he continued in practice until 1838, when he removed to Indianapolis, where he and his father entered into partnership with Dr. G. W. Mears. In 1844 he visited the Indian Reserve, as it

was then called, in Howard County, and, after examining it, decided to locate there. The same season, he and some others built cabins and removed their families to them, and this was the beginning of the present city of Kokomo. In 1847 he represented Howard and Cass Counties in the legislature. In 1863 he became assistant surgeon in Military Hospital No. 3, Nashville, Tennessee, where he remained some time. In March, 1865, he again returned to Nashville and rendered medical services to colored troops. In 1867 he was elected mayor of Kokomo, and served two years. During his long residence in Kokomo, "he preserved a healthful uniformity of life, never mounting to the heights of fame, nor ever descending beneath the level of true manhood."—See an interesting sketch of his life in *Am. Biog. Hist. of Eminent and Self-Made Men of Indiana*, Dist. II, p. 40.

SHIELDS, PLEASANT SCOTT.—New Albany, (1806-1875). Dr. Shields was born near Georgetown, Ind., November 30, 1806, and died at New Albany, January 29, 1875. He remained at the place of his birth until his majority, when he went to New Albany, and entered the office of Dr. Asahel Clapp to study medicine. He returned to Georgetown and practiced for several years. In 1832, he removed to New Albany, where he lived until the day of his death, beloved by all. He was the poor man's friend. Was an Elder in the First Presbyterian Church.—The above written in a neat hand, was furnished me by Mrs. Aresta Nunemacher, aged 81 years, a relative of Dr. Shields.—G. W. H. K.

He was present at the medical convention held at Indianapolis, June 6, 1849.

WARFORD, FRANKLIN M.—Cicero (1834-1909). He resided in Cicero for forty-four years, and thirty-nine years of that time was an active practitioner. He served a short time in the 40th Reg. Ind. Inf., and later as Ass't Surg. of the 3rd Reg. Iowa Cav., and later in the 4th Arkansas Cav. At the close of the war he located in Cicero. See Robson, p. 528.

WEST, CALVIN.—Hagerstown (1806-1863). He was born in Pennsylvania, August 9, 1806, and died at Hagerstown, August 25, 1863. He came to Hagerstown about the year 1834, and practiced there until the date of his death. In the Adjutant-General (Indiana) Report, he is accredited as "additional assistant surgeon pro tem" of the 57th Reg. Ind. Inf. He was vice-president of the State Medical Society in 1857, 1861 and again in 1863.

He contributed the following named articles to the State Society: "Amputation at the Shoulder Joint," 1857, 41; "Fracture at the Base of the Acromion," 1858, 48; "Report on Microscopy," 1858, 51; 1859, 40, and 1861, 34.

WETHERILL, CHARLES M.—Lafayette (1825-1871). Dr. Wetherill was born in Philadelphia, Pa., November 4, 1825, and died in South Bethlehem, Pa., March 5, 1871. He was a graduate of the college department of the University of Pennsylvania, and had an honorary degree of M.D. from the New York Medical College, 1853. He was a resident of Lafayette from 1855 to 1862. He was never in active practice but devoted his life to original research in organic chemistry.

He also pursued his studies as a student in the Royal College of France, and later at the University of Giessen, Germany, under the tutorage of Justus von

Liebig. In 1865 he was appointed chemist to the Agricultural Department in Washington, where he remained one year. He became professor of chemistry at Lehigh University in 1866, and continued in that position until his death. At the time of his death he had been chosen professor of chemistry in the College department of the University of Pennsylvania.

He contributed more than thirty scientific articles relating to chemistry, in various German and American periodicals. One, a very interesting article on "Artificial Lactation," was contributed to the State Medical Society at the session of 1860. *Trans.* 1860, 24.—From notes furnished by Dr. R. B. Wetherill, son—Lafayette.

WOOLEN, LEVIN J.—Vevay, (1834-1909). Dr. Woolen was born in Dorchester County, Maryland, June 30, 1834, and died at Vevay, April 20, 1909. His professional life was spent in the counties of Jefferson and Switzerland.—Moorefield, Madison and Vevay. He was defeated for Congress in 1876, by Leonidas Sexton. In 1878 he was elected to the State Senate, representing Switzerland and Ripley Counties. In 1886 President Cleveland appointed Dr. Woolen as chief of division of swamp lands in the general office at Washington. He resigned this position in 1889, and after practicing his profession for a time in the latter city returned to his Vevay home. After returning home he was twice elected auditor of his county. In the *Transactions* for 1872, p. 25, he contributed, "History of an Epidemic of Parotitis in Switzerland County," also, "A Case of Adenia," *Trans.* 1884, p. 188. He was also author of a book entitled "The Mother's Hand Book," which he intended for the use of mothers of households in the State. See tribute to his memory, by Dr. W. R. Davidson, of Madison, from which I have made the above records, *Indianapolis Med. Jour.*, Vol. xii, p. 265.

THE GREAT IMPORTANCE OF STOMACH LAVAGE FOR THE REMOVAL OF BLOOD SWALLOWED DURING OPERATIONS.

JOSEPH RILEY EASTMAN, M.D.

INDIANAPOLIS, IND.

In extensive intra-oral operations the swallowing of more or less blood is almost unavoidable. No matter what position is used or what precautions are taken, some blood is usually drawn into the stomach during the removal of mouth neoplasms or during the repair of cleft-palate.

After an extensive palate operation, the blood is sometimes discharged in vomitus but more often it is passed off by the bowel. The presence of this blood in the stomach of an infant or small child is not infrequently productive of serious disturbances of metabolism.

The symptoms arise usually very soon after the deglutition of the blood, sometimes within a few hours. The absorption of the pyrogenous constituents of the blood quickly induces a high

fever which in infants may reach 110 Fahrenheit.

It seems fair to assume that the pyrogenous substances here concerned are identical with those which cause the so-called "aseptic surgical fever." It is established that solutions of hemoglobin have a pyrogenous action. Schimmelbusch (Tilton's Surgery) has isolated from the blood a pyrogenous ferment, histocyn, and has demonstrated that this body, which is a product of the normal metabolism, when introduced into the circulation in sufficient quantities can give rise to high fever.

By others the heat producing property of blood has been attributed to fibrin ferment and the nucleins.

Whether these substances actually produce heat or merely interfere with heat elimination is not understood. However, the assumption that blood absorption induces fever is supported by much respectable evidence. For example, Lagenbeck and Cramer (Tillmann's General Surgery, page 314) have recorded an interesting case of chronic ferment intoxication with continuous high fever, cough, and occasional diarrhea in a young woman who had a blood cyst the size of a goose egg on the thigh. The blood cyst had probably developed from a pre-existing cavernous angioma. After its operative removal all disagreeable symptoms immediately vanished. Within the cyst, as in all blood which is not in contact with the normal walls of the vessels, or which becomes stagnant, there had developed different ferments, among them Schmidt's fibrin ferment, which had then gained access to the general circulation, as the cyst, from the cavernous structure of its walls, was in direct communication with the vascular system. The febrile symptoms, and the coagulation processes in the capillaries of the lungs and intestines were caused in this way, corresponding in every respect to the facts which had been noted by Kohler, Bergmann, and others in their experiments on ferment intoxication.

It is likely that there is some intimate relationship between the so-called aseptic surgical

fever and that fever occurring in conjunction with constipation following operations. The pyrexia in either case is due to the absorption of soluble decomposing materials which are fabricated in the intestines either with or without the co-operation of bacteria.

The experiments of Schmidt and Hammerschlag led them to believe that transfusion of blood into an animal will always produce more or less fever, and that free fibrin ferment may be found in the blood of fever patients, very much more often than in those having a normal temperature. Thus it appears that some constituent of the blood (whether hemoglobin, fibrin ferment, a nuclein or an albumose) has the property, on being absorbed into the general circulation, of producing fever.

Observing infants after cleft-palate operation, it has seemed to the writer that the degree of fever varied directly according to the severity and duration of the operation. That is, it appeared that the more blood swallowed the greater the pyrexia. It is possible that the direct absorption of blood from the stomach does not produce the fever in these cases. It is of course thinkable that the presence of the blood simply leads to fermentation of other intestinal contents with consequent disturbance of metabolism, but however this may be, in the writer's judgment at least this fact seems established, that the blood in the stomach of an infant is either directly or indirectly pyrogenous and is therefore a serious menace because of the high fever which it induces. Conversely, it has not been difficult to show that the prompt removal of the blood from the stomach of the infant by lavage militates strongly against the development of the fever. The introduction of a medium sized male catheter and thorough rinsing of the stomach if done promptly after palate operations will therefore remove a dangerous factor.

Death has followed cleft-palate operations, as the result of blood ferment fever, more often than has been appreciated. After mouth operations in a child, blood in the stomach is a "red lantern."

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EDITORIALS

OPERATIVE RELIEF FOR NEURASTHENIC CONDITIONS

Realizing the difficulties offered and the importance of the subject to both gynecologists and medical men, a symposium was presented at the joint session of the American Surgical Association and the American Gynecologic Society last May, dealing with the end results of surgical operations for the relief of neurasthenic conditions associated with the various visceral ptoses, and the extent of their improvement in the neurasthenic state itself.

Blake believes that many ill-advised operations have been submitted to for the relief of such conditions, in which case not only no improvement resulted but the patient was even rendered more miserable. In order to obviate such disastrous results he recommends the fulfillment of four requirements previous to the operation. First: there must be a definite morbid or mechanical perversion of the normal conditions of the viscera; second: it shall be the chief underlying cause of the neurasthenic state; third: one must be certain that the neurasthenic state can not be cured without its correction, and fourth: the correction must be possible by a definite operative procedure of only moderate danger to life. Obviously, conscientious compliance with these four postulates precludes much of the so-called "meddlesome surgery" and taken as a whole they would form an excellent working basis for surgical guidance in the class of cases under consideration.

With regard to the various ptoses of the abdominal viscera, Blake believes the intestinal form to be the most serious one, for aside from the subjective sensations of discomfort such as are produced by malposition of any one of the abdominal or pelvic organs, there follows a train of symptoms in this lesion that manifests itself by lower blood-pressure, intestinal derangements and putrefaction, gas formation and auto-intoxication. While the latter has been a much-abused term, yet the author thinks that it is far-reach-

ing in its effects, depressing the nervous system and thus rendering it more susceptible to sensory impressions, decreasing muscular tone and producing consequent loss of abdominal support to the viscera, permitting of engorgement of the visceral veins and a resulting loss of tone to the intestinal muscularis which in turn leads to gas formation, putrefaction, toxin absorption, etc. According to Blake, the following anatomical conditions in enteroptosis obtain: The fixed hepatic and splenic flexures of the colon are dragged on, and angulated, the transverse colon in its middle often reaching to the pelvis, the caput coli long and the pelvic colon voluminous. Because of the relative obstruction the caput coli becomes dilated and its distention produces pain resembling that of neoplasm or even appendicitis, the author declaring that many an innocent appendix has suffered removal on this account.

Suspension of the transverse colon does not relieve the colonic lengthening, hence Blake asserts that Lane's operation of excision of the ascending and part or all of the transverse colon, with implantation of the ileum into the colon below, seems to be the rational treatment. While he does not recommend this operation as a routine treatment, yet he seems to feel that the deplorable condition of some patients would be a warrant for even a lethal result. To most of us this will appear as rather a radical stand, for however lamentable a patient's condition may be few of us possess a sympathy so extensible as to permit our being a patient's voluntary executioner. While the results of this operation have for the most part been good, yet because of its severity the essayist rightly insists that it should be limited to the very best of hands.

Smith, on the other hand, in his part of the symposium takes the very rational stand that careful inquiry into the history of these patients will reveal that they are inherently of a neuropathic type. Either one or both of their parents have been neurotics or else their early childhood has been such as to predispose them to complaints of this sort. In later life, given a combination of the neurasthenic state with certain abdominal or pelvic visceral lesions, little can be expected from operative procedures so far as the cure of the associated neurasthenia is concerned, unless the lesions be of the so-called major type, i. e., those associated with much pain, hemorrhage or sepsis. Enteroptosis, not associated with such major symptoms, rarely yields by operation, a cure of the accompanying neurasthenia. Smith's conclusions are based on

replies from fifty-one enteroptotic, neurasthenic women who have been operated on. Of these but fifteen can be said to be entirely relieved of their neurasthenia, and of these all but two had had operations for conditions which involved sepsis, pronounced hemorrhage or pronounced pain. From his experience, the outlook is far from encouraging because of the general and deep-seated nature of the trouble and the minor part played by the individual organs in the whole symptomatology. He believes, however, that we shall the sooner seek more logical methods of relief.

So that after all it remains for the surgeon to decide just how great a place in the complex symptomatology of these unfortunates the abdominal or pelvic abnormalities occupy and on the excellence of his clinical judgment will depend to a large extent both the reputation of surgery and the future welfare of such patients belonging to this type as come under his observation.

MEDICAL EDUCATION IN INDIANA AS REPORTED BY THE CARNEGIE FOUNDATION.

Population, 2,808,115. Number of physicians, 5,036. Ratio, 1:558. Number of medical schools, 2.

BLOOMINGTON — INDIANAPOLIS: (Population: Bloomington, 8,902; Indianapolis, 249,426).

(1.) *Indiana University School of Medicine*. Started at Bloomington, 1903, it first gave two years' work at Bloomington, 1905, and the entire course at Indianapolis, 1909, through absorption of the local school. The double department is an organic part of the state university.

Entrance requirement, one year of college work.

Attendance, 266, 94 per cent. from Indiana.

Teaching staff, 175, of whom 99 are professors. The laboratory branches at Bloomington are taught by full-time teachers, some of whom will for a while divide their time between Indianapolis and Bloomington. The Indianapolis teachers are otherwise all practitioners.

Resources available for maintenance: Both departments will be hereafter supported out of the general funds of the university, as the Bloomington department has hitherto been—at a heavy loss, of course. Fees (amounting at Indianapolis and Bloomington together to \$31,240) are paid into the university treasury.

Laboratory facilities. At Bloomington separate laboratories with good equipment are provided for pathology and bacteriology, physiology and pharmacology, and anatomy—the last-named strong in histology and neurology. Embryology is taught in the department of biology, and physiological chemistry in the department of chemistry. Books and periodicals are accessible. At Indianapolis the laboratories of the absorbed school were limited, but the university has already taken some steps to bring them up to the level of the Bloomington department.

Clinical facilities. Clinical instruction will be given at Indianapolis alone. The city dispensary is under control of the school faculty and has just been placed in charge of a man of modern training. The attendance has been good. The City Hospital staff is appointed by the board of health on nomination of the university. The facilities are fair, but they have been used to little advantage in the past. There is no pavilion for contagious diseases.

Date of visit, December, 1909.

VALPARAISO. Population, 6,280.

(2.) *Valparaiso University*. This institution offers first two years at Valparaiso and all four in Chicago. (See Chicago College of Medicine and Surgery). The two-year department was organized in 1901.

Entrance requirement, a high school course or its equivalent.

Attendance, 25.

Teaching staff. Two instructors conduct the classes in physiology, pathology, bacteriology, and anatomy, in the medical building. Chemistry, materia medica, and pharmacy are taught by men who give courses in these same branches to other students. The pathologist spends one-third of his time in the Chicago department.

Resources available for maintenance. Fees only.

Laboratory facilities. There is simple but good equipment for teaching the necessary branches in an elementary form, pathology being perhaps the weakest by reason of the small amount of gross material available. The time of the teachers is consumed in routine work.

Date of visit, December, 1909.

(3.) *Chicago College of Medicine and Surgery*. Organized 1901, and since 1902 the medical department of Valparaiso (Indiana) University; up to 1905 an eclectic institution.

Entrance requirement, a high school education or its equivalent, interpreted to include anything that the state board will accept.

Attendance. The school had an enrollment of 315 in 1907-8, and of 366 in 1908-9, the senior class of the former year numbering 95, the freshman 69. This disproportion is largely due to the fact that advanced standing has been indiscriminately granted to students who had previously attended low-grade institutions, some of them now defunct. Credit has been allowed to former students of even the worst of the Chicago night schools.

Teaching staff. The school has a faculty of 71, of whom 37 are professors. There are no full-time teachers, though some of the scientific branches are taught by full-time teachers of Valparaiso University, who come to the Chicago department on certain days weekly.

Resources available for maintenance. Fees amounting to \$43,430 (estimated.)

Laboratory facilities. The equipment throughout is ordinary, the usual laboratories being provided. There are few teaching accessories.

Clinical facilities. Clinical facilities are inadequate, being limited in the main to an adjoining hospital of 75 beds, of which one-fourth can be used for teaching, and to the Cook County Hospital, on the staff of which the school has two representatives. The dispensary has a fair attendance, and is in some respects well organized.

Date of visit, April, 1909.

GENERAL CONSIDERATIONS

The situation in the state is, thanks to the intelligent attitude of the university, distinctly hopeful, though it will take time to work it out fully. The university has just secured complete control of the Indianapolis school. The state board has already come to its help by making the two-year college standard, in force at the university in 1910, the legal minimum for practice within the state. This places medical education in Indiana, as it already is in Minnesota, in the hands of the state university. The Bloomington department has been of such a character that it was easily possible to make it worthy of college-bred students, but the detachment of its teachers for regular service at Indianapolis should not long continue. While it is highly important that close relations be encouraged, it is necessary to accomplish this by progressively strengthening the Indianapolis end.

The Indianapolis school has been of the ordinary local type of the better sort. In order to make the school attractive to highly qualified students, it will be necessary (1) to employ full-time men in the work of the first two years, (2) to strengthen the laboratory equipment, (3) greatly to improve the organization and conduct of the clinical courses. The trustees have formally committed themselves to this policy. It would appear necessary for some years to regard the needs of the Indianapolis department as a first lien on the increasing income of the university, if the university is to make good the ideals indicated by its entrance requirement. It can do Indiana no greater service in any direction. That done, Indiana will be one of the few states that have successfully solved the problem of medical education.

THE TOXEMIA OF PREGNANCY

While much is known concerning the physiologic changes which take place in the pregnant woman and more light is being sought on her metabolic variations, we are still largely in the speculative stage concerning the essential pathology of that constant toxic condition which manifests itself now as a mere morning nausea of little more import than a slight personal discomfort evanescent in extent, or again as a definite hyperemesis with marked nutritional loss, or even an extreme constitutional toxemia manifested in an actual kidney and liver insufficiency which may lead ultimately to an acute yellow atrophy of the

liver or an eclampsia with total anuria. Wells¹ expresses the hope that "future discoverers, advancing beyond the realms of speculation may demonstrate that, as the result of incomplete or inharmonious complementary union of the attraction centrosomes of the spermatozoon and ovum, some substance is developed, increased and intensified by subsequent fetal growth, which, entering the maternal circulation through the syncytium, is deleterious to the gravid woman, and is the primary cause of the toxemias of pregnancy." And yet efforts to reproduce the eclamptic syndrome by the experimental inoculation of rabbits with the blood-serum of eclamptic women have failed at the hands of Folhard, Schumacher and Semb. Ewing² believes that whatever single distinguishing feature there may be in eclampsia, is found in the kidneys and not in specific poisons from fetus, placenta or uterus; that they indicate in eclampsia, as in the other forms of toxemia, defective urea-forming function of the liver and defective desamidization; and that such storms occur only in an organism long prepared for it by disturbance of metabolism and associated organic change.

Certain definite changes in organs other than the genital and associated ones, and the kidney and liver, are those occurring in the pituitary body and the thyroid gland. It is probable that the pituitary hyperplasia that takes place during pregnancy lends itself to an increase in the secretion of the gland that is necessary for uterine development and the great child-bearing function.

The behavior of the thyroid in pregnancy is extremely interesting and its relation to the toxemia of pregnancy has been dwelt on by Foulkrod, Ward, Beebe and others. Out of 103 pregnant women in the last three months of their gestation period, Lange found the thyroid hypertrophied in all but 25 and in these latter he observed a greater tendency to albuminuria. Nicholson found thyroid hypertrophy in 81 per cent. of his cases, Klein discovered that it was not present when the kidney of pregnancy develops and Lobenstein states that in a series of fifty eclamptics, hypertrophy was present in only two cases. Ward³ reviews the subject thoroughly and cites a most interesting case wherein it seemed pretty conclusively proven that a pregnant, Graves-disease woman was carried by him throughout her pregnancy only with the aid of injections of thyreo-globulin, as experimental omission or decreased dosage were invariably fol-

1. *Am. Jour. Med. Sc.*, July, 1910.

2. *Am. Jour. Med. Sc.*, June, 1910.

3. *Surg., Gynec. and Obst.*, December, 1909.

lowed by marked exaggeration of her toxic symptoms. His conclusions are that the hypertrophy of the thyroid incidental to pregnancy increases the nitrogenous metabolic processes and that failure to hypertrophy or disease of the thyroid gland in pregnancy are frequently followed by toxemia. Furthermore a deficiency of thyroid secretion, either in quantity or quality and remedied by the hypodermic administration of fresh human thyroid proteids, results in the disappearance of the untoward symptoms of the toxemia of pregnancy. Just what relation the parathyroids bear to the toxic state has not as yet been worked out.

During the eclamptic seizure (the eclampsia at the present time marking but one type of the toxic state), three definite effects are produced: viz., (1) A remarkable rise in the blood pressure; (2) a pronounced injury to the nervous system; (3) coagulation of the excessive fibrinogen of the blood, all of which are doubtless due to certain agents arising in the course of disturbed metabolism, probably the products of protein digestion. Ewing, in his excellent article above referred to, expresses himself as deeply impressed by the rapid rise in urinary ammonia during the eclamptic seizure and its rapid fall as the patient improved, and thinks it possible that acute ammonia poisoning may be concerned in the symptoms of such cases since it (ammonia) is a violent nerve poison and causes also a severe degeneration of organ cells. In this connection it is interesting to note the increase in the ammonia content of the blood following parathyroidectomy and the depression of the ammonia conversion power of the liver.

As has been said, Ewing is of the opinion that the severer grades of toxemias of pregnancy, eclampsia and acute yellow atrophy are all but different expressions, and possibly different degrees, of the same underlying disturbance and that in eclampsia, along with the glomerular nephritis there is an acute degeneration of the liver arising in the course of an acute disturbance of its metabolic function.

The importance of chloroform poisoning in the severe hepatic lesions is now well recognized, another case of which is but just reported.⁴

Indeed Ewing asserts that sufficient progress has been made in this field within the past decade to enable us to control the milder cases and greatly reduce the mortality in the severe forms. Systematic urinary analyses, with careful nitrogen partition, seem to offer the best means of early detection of the graver metabolic disorders,

and suggest the early adoption of such preventive measures as the relief of the acidosis, the hygiene of the intestine and correction of indicanuria, the careful control of the diet, with reduction or exclusion of proteins, and the intelligent use of thyroid extract.

THE DISHONESTY OF THE ANTI-VIVISECTIONISTS.

We herewith reproduce a circular letter which has been sent out by the Medical Society of the State of New York and the open letter of Prof. Frederick S. Lee, of Columbia University, concerning the antivivisection movement which is growing so rapidly in certain portions of the country, and particularly in New York. The efforts of the antivivisection societies to prevent scientific research by animal experimentation are deserving of attention on the part of every medical man who appreciates the value of experimental work in the attainment of the scientific knowledge necessary to advancement in the prevention and cure of disease.

As will be noted in the letter by Professor Lee, the antivivisection society has not hesitated to resort to misrepresentation, deception and falsehood in carrying on the fight against vivisection, and if the public is not made acquainted with the facts the charges and representations made by the antivivisection societies are apt to be accepted as true. This cannot but work in a detrimental way in molding public opinion, and especially legislation. A determined and united effort should be put forth to place in the hands of the public the true facts, and especially urgent is the necessity of showing the public how utterly dishonest and untrustworthy the actions and motives of the antivivisectionists are.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

17 WEST FORTY-THIRD STREET.
NEW YORK CITY, June 20, 1910.

DEAR DOCTOR:

Usually we feel that with the legislative adjournment our work in respect to medical law making is finished for the year. This year, however, we find that such is not the case, and we desire to enlist your support and that of your organization in actively combating the determined efforts which are being made to influence public opinion in opposition to the attainment of the scientific knowledge necessary to advancement in the prevention and cure of disease.

As you know, for several years, anti-vivisection societies have had introduced into our State Legislature bills which, if enacted into laws, would seriously interfere with scientific teaching in our medical colleges and with valuable work now being done in our labora-

4. Jour. Am. Med. Assn., July 30, 1910.

ories of scientific animal research. These efforts have thus far signally failed, and, we believe, will continue to fail, provided that the members of our profession oppose them with fitting foresight and vigor. Thus far ample opportunity has been given us by the Legislature, and it has seemed not difficult to convince those of unprejudiced minds of the unwisdom of enacting laws which will in any way interfere with the continued advance of medical science.

Anti-vivisectionists apparently realize the justice of our position, but with a persistency born of a prejudice which will not acknowledge the right, have misrepresented the facts in such a way as to cause certain otherwise fair-minded men and women to join with them in efforts to secure legal enactments which well might lead to private and public disaster.

In New York and other large cities anti-vivisection exhibitions have been given. These, by their gross misrepresentations, in many instances amounting to falsification, which cannot be regarded as entirely unintentional, have so presented animal experimentation to the onlookers as to cause the impression in their minds that scientific experimental laboratories are dens of exquisite torture and that qualified experimenters are conscienceless fiends. How many converts are thus gained to the cause of anti-vivisection we have no means of knowing, but as the leaders seem to have abundant funds for their purpose, their supporters are possibly both numerous and generously disposed.

We are credibly informed that the New York Anti-vivisection Society proposes to take its exhibit to certain of the county and other agricultural fairs to be held in this State during the coming autumn, thus to increase its strength and correspondingly gain support for its purpose at the next Legislature. We believe that such an act as this should be vigorously opposed. And we feel that if men of personal and professional influence like yourself and your colleagues of the County Medical Societies, of Academies of Medicine and of similar bodies would exercise the influence at command, the officers of the agricultural fairs would refuse to allow this unsightly, demoralizing and misleading exhibition to be held in connection with their displays.

Since this matter is equally important to all of us, we urge you to give to it your earnest thought and active opposition. We enclose a significant letter relating to the exhibit in question. We can also place at your disposal other literature bearing on animal experimentation if you will write to this office for it.

We would gladly hear from you regarding this matter at your earliest convenience, and be pleased to learn that we can count on your co-operation in the contest in behalf of medical achievements.

Very truly yours,

CHARLES JEWETT,

President, Medical Society of the State of New York.

WISNER R. TOWNSEND,

Secretary, Medical Society of the State of New York.

FRANK VAN FLEET,

Chairman, Committee on Legislation.

JOSEPH D. BRYANT,

Chairman, Committee on Experimental Medicine.

JOHN S. THACHER,

Secretary, Committee on Experimental Medicine.

AN OPEN LETTER CONTRIBUTED TO THE NEW YORK TIMES BY PROFESSOR FREDERIC S. LEE, PROFESSOR OF PHYSIOLOGY IN COLUMBIA UNIVERSITY, REGARDING THE ANTI-VIVISECTION EXHIBIT OF THE NEW YORK ANTI-VIVISECTION SOCIETY.

To the Editor of the New York Times:

There has been held in this city during the past ten weeks a public exhibition purporting to demonstrate the methods that are employed in laboratories of animal experimentation. It is held under the auspices of the New York Anti-Vivisection Society, an organization which for the past two years has endeavored in various ways to keep itself in the public eye. The exhibition has attracted less attention from the public than it deserves, for, while its scientific character may be questioned, it is valuable as affording a clue to the moral character of an organization which lays claim to a position of moral leadership. There are some of us who have entertained grave doubts as to whether this claim is justified, and these doubts have increased as the various successive acts of the society have been performed since the day of its birth. A study of its exhibition tends to increase these doubts.

The most graphic feature of the exhibition is an array of stuffed animals, some attached to operating tables, some with heads attached to surgical head-holders, some in partial dissection, with surgical instruments lying about, and in one case with a pool of red liquid, simulating blood. The good taste manifested in the public showing of such gruesome sights may well be questioned, and especially in view of the fact that a considerable number of the visitors which one sees at the exhibition are children. They are not only welcomed and allowed to roam freely about the room, but the unpleasant details of the exhibit are explained to them by the women attendants in charge, and a morbid curiosity is thus encouraged. The walls bear many pictures of animals, some undergoing luridly red surgical operations, some exhibiting anatomical dissections, and others participating in a variety of scenes of happiness or misery. The investigator is now and then shown, with a face of diabolical glee, gloating over his victim. A considerable number of portraits of men are shown, chiefly literary men and clergymen, with extracts from their writings, expressing more or less opposition to animal experimentation. In many cases these expressions are direct responses to requests by members of the society, and their language shows the degrading influence of the literature circulated by the society.

A significant part of the exhibition consists of the tales that are told to the visitors by the women attendants. Of the various operations that are portrayed or suggested, one is frequently told that they are customarily performed without anaesthetics, a statement which is not true. One attendant said to a visitor that the surgical head-holders were used for the purpose of breaking the jaws of dogs, and that this was done without anaesthetics. When questioned as to the reason for breaking the jaws of dogs she confessed ignorance. Such a procedure is so patently fantastic as to render comment unnecessary. There is an oven, heated by gas burners which contains the stuffed body of a rabbit, and which the attendant tells you is used for the purpose of baking live animals to death, and that this also is performed without anaesthetics. Fabrication and grotesqueness here reach their culmination, for the oven is an apparatus intended for the incinera-

tion of dead organic matter, the anatomical refuse of a laboratory! The attendants are ever ready to discuss animal experimentation, seemingly quite unaware of their great and prejudiced ignorance. They do not hesitate to speak of well-known and highly respected scientific men in intemperate language that is anything but refined or parliamentary.

To one who is familiar with laboratory procedure, the keynote of this exhibition is falsity. The visiting layman can hardly fail to carry away with him a wholly incorrect notion of what animal experimentation means, what its methods are, and what a measureless amount of good it has accomplished for both the human race and the lower animals. Nowhere is there a sincere desire for the truth; everywhere there is ignorance, misrepresentation, and false implication; everywhere the calmness of balanced judgment is wanting; everywhere there is an unbridled appeal to sentiment, and to sentiment inflamed into passion. The harm is great that may thus be done to the individual, but when such an influence is allowed to spread unchecked through a community the harm that may be done to the multitude is incalculable. Such an influence is both intellectually and morally debasing. When a Bishop of a Christian Church, innocent of the truth and moved only by a blind rage excited by the misleading tales of this society, writes of the beneficent method of animal experimentation, a method from which he and his followers unwittingly derive daily blessings, "I have long been an enemy to vivisection, and am so still, * * * I would like to see it totally abolished and made an offense against the law. * * * I am heartily in sympathy with the effort, not only to reform, but to destroy and root out altogether this sin against the lives of innocent creatures," we may well ask whether the time has not come for enlightened people to band themselves together in opposition to this variety of fatuous fanaticism.

In the exhibition of which I write the most striking single exhibit is the New York Anti-Vivisection Society itself. It has had every opportunity to learn the truth or the falsity of its demonstrations and its declarations. It has been told by those who know, how untrue they are, and yet it has continued week after week to keep its deceptive sights before the public and to tell its false tales. In the minds of those who both know and respect the truth the New York Anti-Vivisection Society stands, under the deceitful mask of a pretended moral leader, as an obscurantist, a partisan of vicious principles and practices, and a foe of the public good.

FREDERIC S. LEE.

Columbia University, Feb. 4, 1910.

EDITORIAL NOTES

THE preliminary program for the Fort Wayne session of the Association appears in this number of THE JOURNAL.

THE September issue of THE JOURNAL will be known as "The Fort Wayne Number" and will contain the program for the annual session of the State Association, to be held at Fort Wayne on Thursday and Friday, September 29 and 30. It

will also contain the reports of officers and committees, and information concerning entertainments, railroad and hotel accommodations, etc.

Since July 1 the following articles have been accepted by the Council:

Accepted for New and Nonofficial Remedies:
Thigenol (Hoffmann-LaRoche Chemical Works)
Supracapsulin 1:1000 Solution (Cudahy Packing Co.)

Adrin Inhalant Comp. (H. K. Mulford Co.)

Adrin Troches (H. K. Mulford Co.)

Accepted for N. N. R. Appendix:

Extract Chinae Nanning (Reinschild Chemical Co.)

So far everything looks very favorable for a large and enthusiastic session of the Indiana State Medical Association, which this year is to be held at Fort Wayne on Thursday and Friday, September 29 and 30. The season of the year is the most favorable of any for the convenience and comfort of members, and every physician in Indiana should make it a point to attend the coming session.

DR. H. H. CRIPPEX, who is now held by the London police on the charge of having murdered his wife, has had a rather checkered career as a quack doctor associated with various concerns offering fraudulent remedies for the cure of deafness. It seems quite probable that he will not have another opportunity of fleecing the public, and if he gets his just deserts he will swing from the gallows.

It takes a long time for an Englishman to wake up, but he finally "gets there." In a recent issue the *British Medical Journal* editorially protests against Antikamnia and gives the results of an analysis which was published by the *Journal A. M. A.* five years ago. "Truth is mighty and will prevail," and give it sufficient time and it will finally get through the tough exterior of the average Englishman.

THE membership of the American Medical Association on May 1, 1910, was 34,176, a net gain for the year of 241. It would appear that organization efforts are not as active as they were a few years ago, or there would have been a larger increase in the membership of the A. M. A. for the last year. Certainly there is enough material in the United States to warrant an increase of the Association to 45,000 or 50,000 members, and with a little effort more than 241 new members should be secured in any one year.

THE attention of delegates and members of the Indiana State Medical Association is called to the secretary's notice printed in this issue of THE JOURNAL concerning credentials, and the order of reception of papers to be presented at the Fort Wayne session. All delegates are required to send their credentials to the chairman of the Credentials Committee, Dr. C. P. Cook, New Albany, at least ten days before the annual session. Alternates shall present their credentials to this committee at the annual session.

COMMENTING on Osler's statement in a recent lecture that women are rapidly becoming addicted to the use of tobacco, and in consequence are becoming victims of cardiac neuralgia and a mild form of angina, the *Journal of the American Medical Association* intimates that one reason why angina pectoris is so common in the medical profession is that the profession is unusually prone to the use of tobacco. Knowing the injurious effects of tobacco, the medical man will advise his patient against smoking, while at the same time several cigars will appear most obtrusively from his vest pocket.

CONSIDERING the difficulty encountered in raising funds from medical men for almost any purpose it is refreshing to hear that the committee appointed to raise by subscription the money necessary to pay off the mortgage on the home purchased by Major James Carroll for his family just previous to his death has succeeded beyond all expectations. The total amount raised by the committee was \$8,431.55. This amount was collected within a very few weeks, and it is not only more than is needed, but the committee has found it necessary to publish several requests to the profession to cease sending in contributions.

DR. JOHN B. MURPHY, of Chicago, president-elect of the American Medical Association, is as well known at home and abroad as any American physician, and his election to the highest office in the gift of the American medical profession is a deserving compliment. He not only occupies a place in the front rank of American surgeons, but is probably the best teacher of surgery that America has ever produced. The *Journal of the American Medical Association* well says: "As a progressive and aggressive member of the medical profession, no less than as a leading educator and a surgeon of high rank, Dr. Murphy honors the office to which he has been elected."

ONE of the important actions of the House of Delegates at the recent session of the American Medical Association at St. Louis was the creation of the Council on Health and Public Instruction, which is to have much of the work formerly done by several overlapping committees, covering such matters as preventive medicine, medical legislation, economics, public instruction in medical, sanitary and hygienic questions, etc. It would seem that the work contemplated can be best accomplished through one general committee, with several subordinate committees, each having specific functions. The action of the House of Delegates is, therefore, in the line of concentration of forces and more thorough and effective organization of the various departments.

ST. LOUIS has the honor of having the third largest session of the American Medical Association, and, despite all predictions to the contrary, the session was successful from every point of view. Over 4,000 physicians registered, and this number has been exceeded only twice, at Boston and at Chicago. All of the sections of the Association had well-attended and profitable meetings and the scientific work was of high grade. The enormous work done by the various committees is well set forth in their published reports which appear in the *Journal of the American Medical Association*, and indicate strikingly the progress which medicine and surgery have made, not only in the interest of the profession, but the public as well.

INDIANA has reason to be proud of its record on medical education following the report of the Carnegie Foundation, which speaks in a complimentary way of the status of medical education in the state. The State University is in control of the situation, and medical education is therefore in safe hands, but there is much to be done before the best results are secured. We have previously referred to the fact that the coming state legislature should be liberal in its appropriations for the State University, and particularly for that portion of the university which deals directly with medical education. The laboratories and other facilities at Bloomington are very satisfactory, but at the medical department in Indianapolis there is room for great improvement. It cannot be doubted that the university authorities are planning to improve conditions at Indianapolis, and it is earnestly hoped that nothing will stand in the way of such advancement as contemplated.

THE Bureau of Food Inspection has issued an official warning to the effect that quacks will not be permitted to test cows for tuberculosis. Only qualified veterinarians are competent to do this work satisfactorily.

How interesting this information must appear to the public when considered in the light of the existing tolerance of the practice of quacks in dealing with human beings. But, then, cows represent a tangible asset and the life of a human being is not counted worth much. It is a well-known fact that state legislatures, and even the national government, appropriate ten times as much money for the preservation of hogs as for the preservation of babies. Quacks can experiment upon people, defraud them, and even kill them, but when it comes to horses, cattle or hogs the best skill must be secured, and the law prescribes the manner in which it should be done.

THE *Archives of Internal Medicine*, published by the American Medical Association, has proven such a success from every standpoint that the Association will now attempt the publication of two other high-class special journals, namely, a journal devoted to surgery and a journal devoted to pediatrics. These two journals, like the *Archives of Internal Medicine*, will carry no advertising and will be conducted on such a high plane that every physician interested in surgery or pediatrics cannot afford to be without them. The publication of such high-class journals will be a great help to scientific medicine, and it is fortunate that the Association, having the finest medical printing plant in the country, is able to undertake this work and make a success of it. It is not intended that the journals shall make a profit, but it is expected that they will be self supporting and of inestimable value in furthering the progress of scientific medicine.

IN the report of the Public Health Education Committee of the American Medical Association for the year 1909 and 1910 the state secretary for Indiana does not give sufficient credit for work that has been done by numerous physicians and medical societies in disseminating information concerning the nature and prevention of disease and the general hygienic welfare of the people. We venture to say that scarcely a city or town of any size in Indiana has not received the benefit of one or more public health lectures, and while it is true, as stated in the report, that throughout the state there is wide need of increased instruction, we believe that the statement in the report

that the total number of people reached by committee work was about 2,100 indicates but a fraction of what has been accomplished by state, county and municipal boards of health and interested physicians who have offered their services voluntarily in the work of education on public health matters.

THE American Medical Association is undertaking a campaign of publicity concerning public health matters and the Committee on Scientific Exhibits offers the suggestion that public health exhibits offer the most practical means of bringing about hygienic and sanitary reform, a religion of daily life. The committee advocates cheap, compact and yet complete exhibits relating to all the problems of public health and comfort. It would be possible in this way to standardize to a large extent public health methods throughout the country. These exhibits should be valuable not only for large cities, but the villages and country districts should receive their benefits. The exhibits ought not be limited to display at long intervals, but should be a feature more or less constantly brought to the attention of the public in every locality. The education in connection with the exhibits should be supplemented by public lectures and demonstrations.

COLUMBIA UNIVERSITY has established a course in optometry and it is announced that classes will begin work this fall. This is one of the most absurd and incongruous actions of which an established high grade educational institution has ever been guilty. We wonder how it happens that the medical fraternity connected with Columbia University offered no objection to this flagrant breach of the functions of an educational institution which aims to be fairly right on all questions. To turn out optometrists, according to the acceptance of the term by the optometrists themselves, is to turn out a pseudo-medical pretender who takes advantage of the situation and in the majority of instances enters the practice of medicine by attempting to prescribe for eye affections of every kind whether such affections require the services of one skilled in medicine or not. Columbia University owes the medical profession an apology if it turns out such a species of medical pretender as the average so-called optometrist represents.

THERE is now a movement on foot to change the date of the annual sessions of the American Medical Association so that they will be held

either the last week in May or the last week in June. At present the sessions are held during the early part of June, and at this time many of the prominent members of the Association, who are engaged in teaching in the various colleges and universities, find it inconvenient to get away. It is thought that more men will be able to attend the sessions if they are held at either an earlier or later date, and at the October meeting of the board of trustees the matter will come up for discussion. Even if the time is not permanently changed it ought to be changed for the Los Angeles session of next year, or otherwise it will be difficult to secure an attendance of eastern members. Our own preference is for a date late in June, and for the reason that at that time college work will be over and the majority of the men will have cleaned up private work preparatory to the summer vacation, and the trip to Los Angeles may be taken as a part of the vacation period.

THE Indiana Alumni of Rush Medical College will have a reunion and luncheon at the Ft. Wayne meeting of the State Medical Association. Professor Le Count, and probably also Professor Haines will be present.

PRESIDENT KENNEDY, of the Indiana State Medical Association, called a meeting of the delegates and committees of the Association, which was held at the Dennison Hotel on July 5. The object of the meeting was to discuss ways and means of promoting the work of the Association, and incidentally to stir up enthusiasm and interest in this year's session of the Association. Owing to the fact that the date of the meeting was so close to the Fourth of July, when many physicians take short vacations, as also to the fact that the weather was extremely hot at that particular time, the attendance was not large. Those who were present were guests of President Kennedy at a dinner, and at the session which followed, no official actions were taken other than to pass a resolution endorsing the efforts of Senator Owen in behalf of the national health bill, and to invite Dr. J. M. Matthews, of Louisville, to deliver an address at the Fort Wayne session.

THAT the "National League for Medical Freedom" is fulfilling its "manifest destiny" is evident. One of its latest champions is Leach, of Indianapolis, the "cancer curer," whose profitable and conscienceless business was interfered with by the postal authorities and by exposures in THE JOURNAL. In a leaflet which Leach sends out to

prospective victims he quotes some of the unedifying slush which the New York *Herald* had to say about the "doctors' trust" when it took up the cudgels for the "league." He complains, too, that he loses a number of victims nowadays because "family physicians who belong to the doctors' trust" persist in confronting possible patients of Dr. Leach with the articles that have appeared in THE JOURNAL. And then he wails, "many of them, without further evidence, immediately drop correspondence with me and surrender their cases to the doctors' trust." Probably this "cancer curer" hopes to find in the "National League for Medical Freedom" that appreciation for his talents which he has not been accorded by those who see nothing to admire in humbugging and defrauding the hopelessly ill.—*Journal A. M. A.*, July 30, 1910.

THE question of the formation of a society of laymen for the promotion of medical research has been discussed by many medical men and it is now thought that during the coming year such a society will be organized. This certainly is a step in the right direction and will have the effect of counterbalancing the dangerous work now done by the antivivisection societies. The American Medical Association Council on the Defense of Medical Research has prepared and published a number of papers which form a unique collection of data concerning the use of animals for experimental purposes and showing the relations between animal experimentation and practical medicine and surgery. The scholarly character of the papers assures them permanent value and the data collected will be serviceable for many years wherever agitation against animal experimentation may arise. The information collected in these papers will be given publicity in the daily press, and the education of interested people is the next step in the action of the council in the agitation of animal experimentation. The formation of a society of laymen will but augment the work that is being done by the medical profession.

THE assistant attorney-general has declared the concern operating the Cora B. Miller Home Treatment for Suffering Women (Kokomo, Ind.) to be a scheme for obtaining money through the mails by means of false and fraudulent pretenses, representations and promises, and recommended that a fraud order be issued against the Mrs. Cora B. Miller Company. The postal authorities found that the concern had a business in excess of \$100,000 a year, and that the medicine

furnished the victims consisted of boric acid, tannin and cacao butter, a box of which sold for \$1 and probably cost less than 5 cents. It was also shown that the business was conducted by Frank D. Miller, though incorporated in his wife's name. According to report Mrs. Miller had nothing whatever to do with the conduct of the business and never had any training that would fit her to prescribe for women's ailments, and in fact her name was used evidently only as an advertising asset. Miller himself is not a physician, and the investigation showed that the medicine was compounded by the clerks and stenographers. The clerks and stenographers also answered by circular letters the inquiries sent in by the victims.—*Abst. Journal A. M. A.*

THE Massachusetts Board of Health has recently issued a circular entitled "Dirty Milk and the Doctor" which contains this interesting statement: "It is a fact to be regretted that physicians themselves as a class do not take the trouble to investigate the conditions under which the milk they drink is produced and the manner in which it is subsequently handled." In other words, doctors do not practice what they preach, and it is time that they turn over a new leaf. The circular goes on to say that the milk producers are in business to make a living, and the demand for cleaner and better milk requires an increase in the cost of production which if carried out should give hope of better returns to the milk men. The tendency among some of the newspapers to agitate for cheaper milk is wrong. The agitation should be for better milk, and for paying what it is worth. The vast influence of the medical profession should be exerted in this direction; and the circular concludes with this direct personal appeal: "If it appears that increased cleanliness can be secured only by an increased price for milk, be yourself willing to pay the increased price, and advise your patients to do the same."

THE *Journal of the American Medical Association* in its issue of July 2 calls attention to the fact that some supposedly reputable pharmaceutical houses are furnishing medicinal preparations to firms or individuals whom they know to be in the business of cruelly defrauding that most helpless portion of the public, the sick. Specific instances are cited to show that many of the largest pharmaceutical houses, who are generally supposed to manufacture only ethical preparations, proprietary or otherwise, and as such to desire the respect and good wishes of the medical

profession, are in the business of furnishing supplies for nostrum venders. The article concludes with the following very pertinent comment: "Legally they may be within their rights, but ethically and morally their course is iniquitous. No amount of argumentative sophistry will justify in the eyes of the medical profession the attitude taken by those manufacturing pharmacists who are willing to sell their products to any who pay for them, no matter to what use the drugs are to be put. * * * How much longer manufacturers of pharmaceuticals will maintain this Janus-faced attitude depends largely upon the medical profession. It is safe to assert that no firm would for long continue this wretched business in the face of insistent disapproval from physicians."

COMMENTING on the death of Dr. Kassabian, the noted x-ray specialist, a prominent Philadelphia physician has the following to say:

Dr. Kassabian was one of the early operators and added much to the science at a time when its dangers were unknown. He worked faithfully at the Medico-Chirurgical Hospital, both night and day, whenever a patient needed his care. During those early years many of the examinations were made fluoroscopically instead of by plates. This necessitated exposure of the operator during all the time that any of the patients were being examined. In this way he got thousands of times as much exposure as any one patient would get, and by continuing for a long time he did irreparable damage to his skin. During all this time none of the patients to whom he gave his services suffered from the effects of the exposure. Today absolute precautions to both operator and patient are possible, and the specialists who are thoroughly equipped make these examinations with very short exposures, using seconds, where formerly minutes and even hours were necessary. The rays are absolutely confined to the parts under examination, and I know of no record of injury from the rays during an examination in recent years, when such examination was made by a skilled operator who was thoroughly equipped.

Dr. Kassabian's enthusiasm carried him away and made a martyr of him to this science. He felt deeply the sufferings of those colleagues who have preceded him, and collected the names and histories of these men, intending to publish a memorial to them. This shows clearly that he did not attempt to make a secret of his troubles, nor of the troubles of others.

HYMOSA, a proprietary remedy manufactured by the Walker Pharmacal Company, of St. Louis, and advertised in extensive and nostrumlike manner as containing no salicylic acid, and by inference that it contains no salicylates, has been examined by the chemical laboratory of the American Medical Association and found to contain the ingredients which the promoters of this pro-

proprietary remedy claim that it does not contain. In the advertisements the following appears: "Recent clinical tests have proved Hymosa (Walker) to be of the greatest value in the treatment of rheumatism and uric acid diathesis. No disturbance of the stomach or heart is caused by this preparation and cures have been effected in many cases where ordinary treatment had been tried in vain. It seems that the use of the dangerous and ineffective salicylic acid will soon be given up and Hymosa take its place."

The report of the chemical laboratory of the American Medical Association says that the results of the examination indicate that Hymosa is essentially a solution containing salicylic acid, sodium salicylate, potassium iodid, alcohol, sugars and plant extractives, and show that the various statements regarding the absence of salicylic acid and salicylates are misleading and untrue. It further illustrates the repeatedly demonstrated fact that nostrums exploited as wonderful and new discoveries are new in name only—and whatever therapeutic value they possess depends on old and tried medicinal agents.

At the conclusion of an oration on cancer delivered at the annual meeting of the Illinois State Medical Society at Danville on May 18, 1910, Dr. George W. Crile, of Cleveland, says: "Based on the work of the experimentalist, the biologist, the internist and the surgeon, tested by a personal experience of over 600 operations for cancer in various parts of the body, the following generalizations are made:

"Cancer occurs widely throughout the entire animal kingdom, in the herbivora and the carnivora, in birds and in fish, quite regardless of habit or mode of living. Its incidence and growth obey the law of known infection; its actual increase in frequency is still unproven; rare cases undergo spontaneous retrogression; in experimental cancers, at least, such retrogression is accompanied by an immunity; the immunity in sarcoma in dogs, at least, is in the blood and may be used to cure other cases in dogs; in man this principle has not as yet been established; no curative power of any drug or serum has (as Bevan has shown) proven effective for human cancer. X-ray and radium may kill superficial cancer cells, but as agencies for cure they are unreliable. In cancers on the superficial parts of the body, where observations may be accurately made, at least in most cancers, there is a precancer stage, the most common form being chronic irritation, chronic ulcer, scar, wart, moles, benign tumors, keratosis, etc. Such cases

should be decancerized. Preventable or curable cancer should not be watched; it should be prevented or cured."

NEW YORK has a new cocain law which requires that the druggist must give to every person who presents a prescription in which cocain or eucain or their salts are ingredients a certificate stating that the bearer has obtained, upon the written prescription of a physician (giving his name), cocain or eucain, and the number of grains given must be stated upon the certificate. What good is to be accomplished by such a law is a matter of question. The most objectionable feature of such a law is the fact that the patient gains the knowledge that he is using corain or enecain, and therefore is apt to aid in making cocain fiends, while it does not in the least prevent regular users of cocain from obtaining the drug. The most effective way to stamp out the cocain evil is to pass more stringent laws concerning the sale of the drug, with heavy penalties for the conviction of any one prescribing or selling the drug except under the strictest limitations. Inasmuch as cocain has few uses as a therapeutic agent, there is no particular reason why a physician should ever write a prescription for it. In fact, it would not be a bad idea if the law prevented the prescribing of cocain and limited its use to the physician. The conscienceless physician might for a time take advantage of such a law and reap a harvest by having coain fiends come to him for their local applications or injections, but even this evil could be kept within reasonable bounds through records of the sale of cocain by the manufacturers or dealers to physicians.

DR. THOMAS J. GRIFFITH takes his pen in hand and writes the *Crawfordsville Journal* to the effect that he has for a long time suppressed a desire to give the laity Mother Nature's best remedy for blood poisoning. Incidentally he states that of many cases of blood poisoning that he has treated he has not lost a single case. He then proceeds to recommend the readers of the *Crawfordsville Journal* to treat cases of blood poisoning with the exquisite quality of mud, containing decomposing vegetable matter for many centuries, which abounds in and around Crawfordsville. The mud is mixed to the consistency of batter with buttermilk and the pasty mass is applied over the infected region of the patient, and changed every one or two hours. One of the doctor's patients who had this delectable composition applied for the relief of a severe case of blood poisoning was "well and

happy" the following morning, "every particle of fever and swelling was gone from the limb, the skin laying in white folds upon the foot." Another case of severe blood poisoning with tetanic symptoms in the muscles of the face "was saved to family and country and the premature entry of the golden stairs prevented."

The manufacturers of Antiphlogistine ought to be green with envy when they read such a glowing tribute to the virtues of the mud in and around Crawfordsville. The wonder is that any self-respecting newspaper will publish such idiotic nonsense. If memory serves us right Dr. Griffith is the gentleman who a few years ago read a paper before our state association bitterly condemning antitoxin in the treatment of diphtheria and recommending in its stead a treatment just about as rational as his treatment for blood poisoning.

THE Chicago Health Department is making strenuous efforts to educate the public concerning the care of the health during the hot weather, and one can hardly pick up a Chicago paper without finding conspicuously displayed a few pertinent suggestions from the Chicago commissioner of health as how to live in order to avoid ill health. Among many rules and suggestions offered the following are conspicuous:

"Don't be fussy and don't worry about anything—no man endowed with equanimity suffers from heat.

"Dress coolly—wear a shirt waist or go in your shirt sleeves when you can.

"Drink freely of pure water, cool but not cold, buttermilk, charged or high-grade mineral waters which you know to be from clean springs and bottled in a clean way, lemonade and other fruit-juice drinks.

"Don't drink alcoholic beverages in hot weather.

"Eat lightly, and mostly of fruits and vegetables that are not over-ripe or undergoing decay. Avoid food that you have to chase a swarm of flies from before eating. A case of typhoid is a case of carelessness and means that the sufferer has taken the disease in what he eats or drinks, and flies are often responsible."

Concerning the subject of smallpox and vaccination the following is offered:

"Germany has no smallpox hospitals—compulsory vaccination saves all such useless trouble and expense. A little scar on the arm saves many on the face."

On the subject of the care of the baby the following is offered:

"Dress the baby in the thinnest of clothes in hot weather.

"Give him clean milk. There is no such thing as clean milk in a dirty bottle. As baby killers house flies and long-tube nursing bottles cannot be too highly recommended.

"Give the baby plenty of cool, pure water, or barley water. Do not give the baby beer. Baby plus beer equals bier.

"Fresh air is needed by the baby as well as the adult. No bedroom is large enough to sleep in with the windows closed."

The public can stand a great deal of education on this subject of the preservation of health, and the newspapers will be doing a real service in repeatedly publishing such information as any wide-awake and progressive board of health can furnish. Secretary Hurty, of the Indiana State Board of Health, has done much work in this direction, but his efforts will be more effective if he has the cooperation and assistance of the county and municipal boards of the state. As a general thing newspapers are willing to publish anything of an official nature which comes from health boards, and it therefore remains for the members of the boards to get busy if the most is to be accomplished.

GOVERNOR MARSHALL has had his troubles in dealing with the Indiana State Board of Medical Registration and Examination, and if current report is true he has found occasion to say some rather emphatic things concerning the manner in which the prescribed duties of the board are to be carried out.

Unfortunately Governor Marshall followed in the footsteps of some of his predecessors and made some appointments on the board without due regard to the qualifications of the appointees. It is a well known fact that with few exceptions the men forming the board have not been representative men and have not had the endorsement of the particular schools of medicine which they were supposed to represent. Politics has invariably controlled the appointments, and if a man had sufficient "pull," no matter whether he had the necessary qualifications for office or not, he has been able to secure appointment on the board. Notwithstanding this unfair and dangerous method of selecting members, it must be admitted that in the main most of the members of the board have regularly and persistently advocated and upheld a high standard. Recently, however, owing to new blood on the board, the question of maintaining a high standard for medical practice in the State of

Indiana has been hanging in the balance, and it was a serious question if the board, through a majority rule, was not to take a step backward and throw down the bars, which would not only allow the unfit to come into Indiana but place the state in unfavorable comparison with surrounding states, where requirements are constantly on the advance. Even the question of reciprocity has been seriously endangered by some of the recent actions of the board, and in an effort to keep up the standard which some of the members would have lowered, considerable friction arose, finally necessitating the interference of the governor, who found it necessary to request the board to behave properly or suffer such consequences as are open to the adoption of the executive of the state. The governor is quite willing to admit that he has made some mistakes in appointments to the board, and he is trying to rectify those mistakes, but he does not hesitate to say that he does not propose to permit the board to take advantage of the mistakes that he has made.

The medical profession of Indiana is interested in having a good board. The law specifies how many of the board shall be Republicans and how many Democrats, and what schools shall be represented. However, medical men as a class do not care anything about the politics of the board, but they do care about the quality and standing of the men who are appointed to the board. The governor can do credit to himself and to the medical profession if he will make such appointments as have the endorsement of the various schools represented. A position on the board should not be dependent upon the influence or recommendation of pothouse politicians, nor should the position be given to some doctor who has dabbled in politics more than he has in medicine. The board is an educational feature of the state and the men on the board should be representative as well as educated men.

THE Section on Ophthalmology of the American Medical Association has put itself on record as declaring that refracting of human eyes is an important part of medical practice and recommends that every general practitioner should have the training in ophthalmology which will enable him to manage infectious diseases of the eye and its refractive defects. In a series of resolutions to the House of Delegates of the American Medical Association the Council on Medical Education is requested to arrange a curriculum able to equip medical students with such training, and recommends medical colleges to adopt

the same. The action of state registration boards now requiring such training for license is given approval and other registration boards are advised to adopt like measures.

Concerning the question of so-called optometry the Section on Ophthalmology presented the following resolutions:

WHEREAS, In many states examining boards of optometrists have been legalized and are assuming in their examinations of students prerogatives of the medical profession; and

WHEREAS, In a number of states either the governor or the board of medical examiners has appointed ophthalmologists to serve with opticians in examining candidates for license in the mechanical examination of the eyes (so-called optometry); and

WHEREAS, Such affiliations on the part of medical men are practically endorsements of the optician's claim that laymen without medical education are capable of prescribing for errors of refraction; and

WHEREAS, These underlying ocular defects can only be diagnosed and corrected by the educated physician, who can appreciate this special work, by functional and objective examination; and

WHEREAS, This matter assumes importance because in many states the examining optician without medical training or responsibility is seeking legal authority to make diagnosis of and prescribe for ocular defects; there, be it

Resolved, That the Section on Ophthalmology of the American Medical Association memorializes its House of Delegates with the following petition:

The section prays: that the House of Delegates express its disapproval of ophthalmologists serving with opticians on boards examining men who have not taken medical courses endorsed by the Association of American Medical Colleges and considers the acceptance of such appointment by ophthalmologists as contrary to the spirit of the code of ethics of the American Medical Association.

That the House of Delegates urge on all members of the American Medical Association, first, that legal recognition of the optician to diagnose the condition of the eye is an infringement on medical practice laws, and therefore should not be sanctioned by any state or institution; second, that referring patients to opticians by a physician should be deprecated because it is not only exposing them to the risk of incomplete diagnosis and unnecessary suffering, but is aiding and abetting men who have no medical education in their acknowledged and open efforts to enter on an important field of special medical practice.

Furthermore, the House of Delegates is memorialized to request the American Medical Association to publish a history of so-called optometry and optometry colleges, and that such pamphlet

be sent to officials of state medical societies and medical men interested in defeating the efforts of these men to enter the medical profession by false pretenses.

The resolutions include the recommendation for the appointment of a committee of two, who are members of the Section on Ophthalmology, to furnish the necessary data.

CORRESPONDENCE

NOTICE TO THE DELEGATES AND ALTERNATE DELEGATES TO THE INDIANA STATE MEDICAL ASSOCIATION.

INDIANAPOLIS, Aug. 1, 1910.

To the Editor: Attention should be called to the new rule requiring the delegates of the Indiana State Medical Association to send their credentials to the chairman of the Credentials Committee, Dr. C. P. Cook, New Albany, Ind., at least ten days before the annual session. Alternates should present their credentials to this committee at the annual session, which is to be held this year at Fort Wayne, September 29 and 30. All papers offered for the program of the Fort Wayne session must have the endorsement of the county society of which the writer is a member.

F. C. HEATH, Secretary.

THE OFFICE SEEKS THE MAN.

NORTH VERNON, Ind., July 21, 1910.

To the Editor: Thinking that the many friends of the medical profession of the state, and especially of the Fourth District, will be interested in the political career of Dr. W. H. Steinn, of this city, for the past year, I send this as an item of news:

While he was absent from the city, attending the session of the Indiana State Medical Association at Terre Haute last year, he was placed on the Democratic ticket for councilman from the first ward, without his knowledge or consent, and with a heavy majority against him he was beaten by 30. Last March he was solicited to accept the chairmanship of the Democratic county central committee, which he did.

In June he was unanimously elected by the city council a member of the city school board, but before qualifying for this position a vacancy occurred in the mayor's office, when his friends, regardless of party, requested him to accept the office. After considering the matter he gave his

consent and was elected to the city council, July 6, to serve three and a half years of an unexpired term.

The interesting point of this history is that it is a case of the office seeking the man, and since his induction into office the "lid" has been on, and violators, without regard to sex, color, or previous condition of servitude, have been made to toe the mark.

Very truly yours,

D. R. SAUNDERS, M.D.

DEATHS

DR. PHILLIP DICKES, age 57, died of cancer at his home in Greenville, Ohio, July 7. He was formerly a resident of Jay County.

DR. LUTHER B. TERRELL, of Anderson, died at an Indianapolis sanatorium July 8, of double pneumonia, following nervous prostration, aged 56. At the time of his death he was resident physician for the American Steel and Wire Company.

DR. THOMAS CAMMACK, aged 86, who practiced medicine at Milford for more than sixty years, was found dead in bed July 9. Death followed heat prostration.

DR. REUBEN C. GRIFFITT died at his home in Morgantown, July 23. He had been in a comatose condition since his fall from a second story window on the night of July 4, and was not able to tell how the accident happened. Dr. Griffitt was born in Sullivan County, Tennessee, December 28, 1845. He was reared in Morgantown, varying his short terms of study in school with work on the farm until 18 years of age. In 1864 he enlisted in Company C, 22d Indiana Infantry. Dr. Griffitt wrote and published a book entitled "Six Months in Rebel Prisons," in which he gave his own experience. He was one of the three men selected by Ex-Governor Frank Hanly to superintend the purchase and erection of the Indiana monument erected in the National Cemetery at Andersonville, Ga., November 26, 1908.

NEWS, NOTES AND COMMENTS

DR. FRANK B. WYNN, of Indianapolis, has been selected as the head of the Civic Commission for that city.

DR. HOMER I. JONES, of Indianapolis is recovering from a dislocation of the right arm following a bicycle accident.

DR. FRANK W. FOXBURY, Indianapolis, was commissioned August 2 as captain of the Medical Corps, Indiana National Guard.

DR. E. J. DUBOIS has been appointed Bacteriologist and Pathologist to the City Board of Health, Indianapolis, vice Dr. Frank Truitt, resigned.

MISS ANNA L. BOWMAN and Dr. Geo. W. Combs were married July 6, at Bloomington, Ill. They will reside at 2724 Sutherland avenue, Indianapolis.

DR. PHILLIPS, of Sheridan, while riding his motoreyele near Noblesville, ran into a dog in the road, and in tumbling from his machine suffered three broken ribs and a broken arm.

DR. H. C. SHARP, of Indianapolis, and Dr. D. C. Peyton, superintendent of the State Reformatory at Jeffersonville, have been selected by Governor Marshall as delegates to the International Prison Congress.

DR. THEODORE POTTER, of Indianapolis, is spending August and September on the Pacific coast. He expects to spend several weeks living out of doors at the foot of Mount Adams in the Cascade mountains.

DR. ALBERT E. BULSON, JR., of Fort Wayne, was elected chairman of the Section on Ophthalmology of the A. M. A., at the St. Louis session. Dr. Bulson had previously served as secretary of the Section for seven years.

DR. WILL SHIMER and Miss Mayme Brown, daughter of Dr. and Mrs. C. S. Brown, were married at Wanamaker, Ind., June 5. They will live in Indianapolis, where Dr. Shimer is assistant pathologist to the State Board of Health.

DR. A. J. BANKER, well known throughout southern Indiana and Indianapolis, is critically ill at his home in Columbus, Ind., from peritonitis. Dr. Banker formerly conducted a hospital in Columbus, and is local surgeon of the Pennsylvania Lines.

DR. GEO. EDENHARTER, the superintendent of the hospital for the insane at Indianapolis, has been selected by the American Medico-Psychological Association as its delegate to the International Prison Congress, to be held in Washington in October, 1910.

It will be of interest to our readers to learn that the W. D. Allison Company, of Indianapolis, have recently purchased the patterns, patents, stock and good will of the Surgical Chair business of the Canton Surgical & Dental Chair Company, of Canton, Ohio.

DR. MASON LIGHT has resigned as intern at the Methodist Hospital, Indianapolis, and will engage in the practice of Medicine at Broad Ripple, Ind. Dr. A. G. Cooper, of Circleville, Ind., a recent graduate of Indiana School of Medicine, has been appointed intern in his stead.

DR. GEO. W. SPOHN, of Elkhart, writes from Vienna that he is enjoying the post graduate courses there, and finds plenty of opportunities for work under some of the world's most noted specialists. He has spent a number of weeks in Vienna, and will continue the work in Berlin and Freiburg. He expects to be home by September 1.

DR. J. W. JACKSON, of Indianapolis; Dr. Frederick Hershman, of Sheridan, Ind.; Dr. Albert S. Cleage, of Tennessee; Dr. Walter Haverth, of Ohio, and Dr. E. E. Dougherty, all recent graduates of the School of Medicine of Indiana University, have been appointed interns at the City Hospital and City Dispensary, Indianapolis.

DR. HARRISON GABEL, of Centerville, one of the oldest and best known physicians in Wayne County, was shot and seriously injured by George Dunlap, age 20, a Civil War veteran, August 1. Dunlap had been a victim of hallucination for several years, and apparently shot Dr. Gabel without provocation. It is thought Dr. Gabel will recover.

INDIANAPOLIS physicians are "summering" as follows: Dr. Fred A. Charlton, in Europe; Dr. and Mrs. J. N. Hurty, at Adon, Mich.; Dr. T. C. Hood, in Colorado; Dr. and Mrs. E. F. Hodges, in Vermont; Dr. and Mrs. G. B. Jackson, at Lake Wawasee; Dr. and Mrs. Frank Morrison, at Lake Maxinkuckee; Dr. and Mrs. C. E. Cottingham, on a farm near Noblesville; Dr. and

Mrs. B. B. Pettijohn, in California; Dr. O. G. Pfaff, motoring in the East and at St. Vincent's Hospital, where he is recovering nicely from his accident; Dr. W. F. Clevenger, in Europe; Dr. Albert Seaton and Harry Langdon, in New York City.

FEW of our readers realize that baby incubators and invalid beds are procurable without necessitating purchasing them outright, and can be rented by the day, week or month from Sharp & Smith, of Chicago. We are advised that they can be shipped immediately upon the receipt of mail, telephone or telegraph orders. Prices and terms will be furnished by this firm upon application to them.

IN publishing in the July number a list of Indiana physicians who attended the St. Louis session of the A. M. A., we omitted the names of some Indiana physicians who were in St. Louis, but this was because their names were not given upon the official bulletins of the A. M. A., from which the list was taken. Our attention has been called to the omission of the name of Dr. D. C. Peters, of Greentown, Indiana, and it may be that there are others.

SINCE the publication of the July number of THE JOURNAL the following have been reinstated as members of the Indiana State Medical Association:

MADISON CO.	FOUNTAIN CO.
ANDERSON.	WEST LEBANON.
J. C. Armington.	I. H. Dunaway.
E. M. Conrad,	LAGRANGE CO.
O. E. Druley.	TOPEKA.
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METZ.	MARION CO.
O. H. Swantusch.	INDIANAPOLIS.
PLEASANT LAKE.	E. F. Hodges,
A. W. Goodale.	H. R. McKinstry,
NEWTON CO.	I. T. Medsker.
RENSSELAER.	VANDERBURG CO.
M. D. Gwin,	EVANSVILLE.
I. M. Washburn.	C. F. Diefendorf.

THE annual session of the American Association for the Study and Prevention of Infant Mortality, will be held at Baltimore, November 9 to 11, 1910. In the study of the prevention of infant mortality the subject will be considered in four special sessions, as follows: 1, Municipal, State and Federal Prevention; 2, Medical Prevention; 3, Educational Prevention; 4, Philanthropic Prevention. A special report on birth registration is being prepared under the

direction of Dr. C. L. Wilbur, chief of the Division of Vital Statistics of the Bureau of the Census, and the report of the committee on birth registration will be presented at the session on Municipal, State and Federal Prevention, of which Dr. William H. Welch is chairman. The aim of the Association is to quicken the sense of responsibility already aroused, and to stimulate definite plans of prevention. Membership is open to all who are interested in the baby. It is not limited to physicians, investigators, nurses, social workers, or associations which deal directly with the problem, but it is hoped that the fathers and mothers of the children who are getting a square deal will consider it a privilege to further the cause of less fortunate children.

THE Northern Tri-State Medical Association held its annual meeting at Elkhart on Tuesday, July 12. The following program was carried out: "Gonorrhea in the Female," Dr. S. C. Loring, Plymouth; "Functional Tests of the Hearing as an Aid in Diagnosis," Dr. Albert E. Bulson, Jr., Fort Wayne; "The Differentiation of Cholelithiasis from Gastric and Duodenal Ulcer," Dr. C. N. Smith, Toledo; "Spinal Anesthesia," Dr. J. H. Jacobson, Toledo; "The Less Common Fractures," Dr. P. M. Hickey, Detroit; "The Ocular Factor in Certain Neuroses," Dr. Charles Lukens, Toledo; "Some Points in Kidney Surgery," Dr. Miles F. Porter, Fort Wayne; "The Possibility of Curing a Carcinoma of the Uterus by the Radical Abdominal Operation, with a report of thirty-eight cases," Dr. Reuben Peterson, Ann Arbor. A public address on Tuberculosis, with lantern demonstration was given in the evening by Dr. Victor C. Vaughan, Ann Arbor.

The election of officers for the ensuing year resulted as follows: President, Chas. Stoltz, South Bend, Indiana; vice-president, P. M. Hickey, Detroit, Mich.; secretary, Geo. W. Spohn, Elkhart, Indiana; treasurer, J. A. Weitz, Montpelier, Ohio; censors, E. J. Bernstein, Kalamazoo, Michigan; C. N. Smith, Toledo, Ohio, and I. J. Becknell, Goshen, Indiana. The next or mid-winter meeting of the Association will be held in Kalamazoo on some date in January, to be selected by the officers.

DR. M. K. KASSABIAN, of Philadelphia, for many years known as a specialist in x-ray work, recently died from the effects of the rays during years of continuous research and investigation. He received his first injury in 1902, when the finger nails on his hands were burned. He placed

himself in the care of physicians, who noticed that the burns produced an effect on the skin similar to that of cancer. Two years ago his hands became so badly affected that it was found necessary to amputate two fingers, but the operation did not check the progress of the cancer-like affection, and a year ago it was found to be extending up his left arm, causing an enlargement of the glands under the armpit. This became so serious that it was found necessary to remove the glands. The second operation proved as futile as the first, and it was considered necessary to subject the patient to a third operation, consisting of the removal of certain muscles on the left side of his chest. He apparently rallied from this operation, and for a time improved, but his condition finally became worse, eventually resulting in his death on July 12.

Dr. Kassabian, who was but 42 years of age, was an instructor in electro-therapeutics and *x*-ray treatment in the Medico-Chirurgical College from 1898 to 1902, and from 1902 until the time of his death he was director of the Roentgen Ray Laboratory in the Philadelphia General Hospital. Dr. Kassabian was an acknowledged authority on the subject of the *x*-rays, and has contributed several books and a number of pamphlets on the subject. His most important work is *Electro-Therapeutics and the Roentgen Rays*, which is a recognized text book in many medical colleges.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION.

PRELIMINARY PROGRAM FOR THE FORT WAYNE SESSION.

Artero-Sclerosis. H. R. Lowder, Bloomfield.

The New Doctor. M. C. Kimball, Converse.

Ophthalmia Neonatorum. Its Prevention. Geo. F. Keiper, Lafayette.

Some Observations on Movable Kidney and the Description of a New Fixation Operation Therefor. F. A. McGrew, Laporte.

The Laboratory vs. Clinical Methods in the Practice of Medicine. D. M. Green, Muncie.

Cesarian Operations in Indiana. G. W. H. Kemper, Muncie.

Lung Fever. H. E. Jones, Anderson.

Fractures of the Patella. Paul J. Bareus, Crawfordsville.

Pathology, Symptoms and Treatment of Burns. G. W. Anglin, Warsaw.

Present Trend of Obstetric Surgery. G. B. Jackson, Indianapolis.

History of Rabies and Treatment. H. S. Thurston and H. R. McKinstry, Indianapolis.

Hygiene of Menstruation. Jane M. Ketcham, Indianapolis.

Bone Transplantation. David Ross, Indianapolis.

Migraine. C. F. Neu.

Malaria in Indiana. Ada Schweitzer, Indianapolis.
Blood Cultures in Typhoid Fever. Wm. Shimer, Indianapolis.

Serum Diagnosis of Syphilis. J. P. Simonds, Indianapolis.

Selection and Use of Catheters and Sounds. W. N. Wishard, Indianapolis.

Differential Diagnosis Between Labyrinthine Suppuration and Cerebral Abscess. J. J. Kyle, Indianapolis.

Chain Sutures. J. R. Eastman, Indianapolis.

Conservatism of Early Cesarean Section. O. G. Pfaff, Indianapolis.

Clinical and Laboratory Observations of a Series of Cases of Paresis. M. A. Bahr and J. A. Jackson, Indianapolis.

Autointoxication from the Alimentary Canal. P. B. Carter, Maey.

ALLEN COUNTY.

The Fort Wayne Medical Society met in special session in the Assembly Room Tuesday Evening, June 13, 1910, to take action on the death of Dr. Carl Schilling, with seventeen members present. Drs. Porter, C. B. Stemen and A. P. Buchman were appointed a committee to procure the floral offering.

Motion passed that society attend funeral in a body.

Adjourned.

J. C. WALLACE, Secretary.

GRANT COUNTY.

"The Present Status of Therapy," by Dr. Glenn Henly of Fairmount, and "Bier's Treatment," by Dr. J. A. Mattison, were the subjects of discussion at the June meeting of the Grant county medical association. The election of officers was held, resulting as follows: J. E. Johnson, president; Joseph Maurer, vice president; V. V. Cameron, secretary; M. T. Shively, treasurer; J. M. Toney of Van Buren, censor, and J. A. Mattison, delegate to the state convention.

KOSCIUSKO COUNTY.

The July meeting was held on the 26th instant. Dr. C. R. Long of Pierceton read a paper entitled "Fractures of the Long Bones." In the discussion which followed, Dr. Hines spoke of plaster of Paris as being the best dressing; emphasizing the fact that common sense and good judgment should be used in dressing fractures and that no two can be dressed just alike. Dr. C. A. Daugherty of South Bend, Councilor 13th District, laid stress on the necessity of making a diagnosis under an anesthetic. "It is very difficult," he said, "to make a diagnosis when the patient is squirming with pain and the muscles are rigid. In using plaster of Paris, he has found it of value to saw through it on either side (after it has hardened) with a gigley saw, the saw having been placed in position prior to applying the plaster. This leaves two well applied splints which can be kept snugly in place with the moderately firm pressure of a roller bandage. Dr. Scott of Hecla, puts splints on two sides of the bone and advises getting the patient up on crutches, if possible, as it helps against malformation. He spoke of the fact that it is the muscles which pull the bones out of position and that this is less likely to occur when the limb is in its normal attitude. Dr. Young cuts the plaster with a knife lightly at first and then

drops hydrogen peroxide along this line. This, he said, softens the plaster and the knife can then go through it quickly. Dr. Anglin advocated the use of a temporary splint for three days and then putting on the plaster, thus not running the danger of injury through the limb swelling under the plaster. Dr. Burket, who has had a longer experience in the treatment of fractures than anyone else in the county, said that he is a strong believer in the use of plaster, applied after the inflammation and swelling have been overcome under a temporary dressing. Dr. Howard of Columbus, Wis., stated that in his section of the country an anesthetic is almost always used in fracture cases; he further said: "It is the experience of the average practitioner, that if you are not afraid to look at them and adjust them and keep them in position, they do not give the trouble that we expect to get from the fracture."

Dr. Daugherty read a paper on "The Open Treatment of Fractures."

Dr. Hines, as health officer for the county, requested the members to be sure to send in a record of all the diseases mentioned by the State Board of Health as reportable.

President Yocum expressed the pleasure the society felt as having for our guests the Councilor of the 13th District—Dr. Daugherty, who had favored us with a paper, and Dr. Scott and Dr. Howard, who had joined in the discussion.

Adjourned.

C. NORMAN HOWARD, Secretary.

SPENCER COUNTY.

The Spencer County Medical Society met in regular session July 19, at Grandview with ten members present. Minutes of previous meeting read and approved. Several interesting cases were reported. Dr. W. R. Davidson gave a talk on Organization.

Dr. Weiss read a paper on Ophthalmia Neonatorum, in which he advised the use of nitrate of silver 1 per cent, immediately as a preventive after infection. He suggested education rather than statutory law as the proper way of remedying the evil.

Adjourned.

H. Q. WHITE, Secretary.

BOOK REVIEWS

EXERCISE IN EDUCATION AND MEDICINE. By R. Tait McKenzie, B.A. M.D., Professor of Physical Education and Director of the Department, University of Pennsylvania; Fellow of College of Physicians of Philadelphia, and of the American Academy of Physical Education, etc. Pages, 406, with 346 illustrations; cloth. W. B. Saunders Co., Philadelphia and London, 1909.

Exercise as an educational adjunct or a therapeutic measure is by no means an innovation, but it has become a powerful influence in regaining as well as retaining a condition of health. Unfortunately it has been much abused in its application by inexperienced and empirical masseurs and the like.

In this publication Dr. McKenzie has given a comprehensive history of the use of exercise in education and medicine, a scientific discussion of its indications and a rational and complete description of the methods to be employed in its application. The book is addressed to the students and practitioners of physical training, to teachers of youth, and to students

and practitioners of medicine and it is admirably adapted to all of these.

It is beautifully illustrated and especially commendable in the minuteness with which the various exercises are described. The book itself is well gotten up, the paper and print good and the text easily read and almost free from errata.

PULMONARY TUBERCULOSIS AND ITS COMPLICATIONS. By Sherman G. Bonney, M.D., Professor of Medicine, Denver and Gross College of Medicine, Denver. W. B. Saunders Co., Philadelphia and London, 1910. Cloth, \$7.00 net; half morocco, \$8.50 net.

The second edition of this work, the first appearance of which was accorded a very favorable reception, will be received with much interest. A careful revision has been made with much new subject matter that has appeared in recent literature, particularly contributions to the last meeting of the International Congress on Tuberculosis added.

Five new chapters appear; these include micro-organisms, closely resembling the tubercle bacillus, Roentgen ray, tuberculosis and traffic, surgical procedures, and the clinical application of tuberculin and bacterial vaccines, all of which are valuable acquisitions.

The book is essentially a clinical one, hence intensely practical. In regard to the use of tuberculin Dr. Bonney is wisely conservative. However, he states that the results of tuberculin treatment are very satisfactory in a number of cases.

A volume which is the outcome of an extensive experience in all forms of tuberculosis, such as Dr. Bonney has had, is of inestimable value in any branch of medicine.

DISEASES OF INFANCY AND CHILDHOOD. By Henry Koplik, M.D. Third edition. Revised and enlarged. Lea & Febiger, New York and Philadelphia.

The revision made necessary by the advances in our knowledge of the special pathology, diagnosis, and treatment of the diseases of infancy and childhood brings this text up to the standard of a most complete volume in pediatrics.

One notes in particular new observations regarding the diagnosis and treatment of infectious diseases. In this section is given the very interesting data in regard to the lessened mortality in cerebro-spinal meningitis, since the use of the Flexner serum. Tuberculosis, which is now conceded to be very prevalent among children, is covered fully and with precision, giving the various important phases in symptomatology, diagnosis and treatment. The chapters on nutritional disorders so frequently difficult of differentiation, likewise the diseases of the stomach and those of the nervous system, have been recast. In the latter the observations on poliomyelitis, opportunity for the more extended investigation of which has been amply afforded during recent epidemics, are most helpful.

New chapters on idiocy, dwarfism and neurotic conditions have been added. These will be of value to the practitioner, as will also the chapters on adenoids, and examination of the ear, the pathologic conditions of which latter, too frequently recognized, result seriously and even fatally. In the portion given to intestinal parasites is a brief but clear description of uncinariasis, a disease of which children are the principal victims.

The introductory chapters covering the methods of examination, of administering drugs, and the management and hygiene of the normal infant, are particularly helpful.

Such a text, the result of careful, keen, discriminating observation in this wide field of pediatrics, together with well selected and tried advances along the same line, is sure to meet with the hearty approval of the profession at large.

SPONDYLOTHERAPY. By Albert Abrams, A.M., M.D., F.R.M.S., Consulting Physician to Mount Zion and French Hospitals, etc., San Francisco. Illustrated. Pp. 400. Buckram. The Philopolis Press.

Possibly the profession may at times seem to be enthusiastic, super-scientific in rejecting all that it is not founded upon definite proof throughout. Likewise it is loathe to accept readily any new and little-tried therapeutic measure, especially when that measure savors of any particular "system of treatment." And perhaps we do not always avail ourselves of all that might perchance be afforded by osteopathic, psychotherapeutic or other allied agencies, because we have so often witnessed their evils overshadowing their merits. So that it is not surprising that when a cure of exophthalmic goiter is said to be offered by a method of tapping certain of the spinous processes, the profession once more looks askance.

True it is that as yet we are not clear as to the etiology of some diseases, such, for instance, as diabetes, but that gives no man the right to assume that it is a vasomotor neurosis and proceed to treat it accordingly, as though such origin were an indisputable fact.

And thus it appears that much that finds space in the therapeutic department of this work is purely speculative and decidedly wanting as yet for verification.

HEART DISEASE—BLOOD PRESSURE AND THE NAUHEIM-SCHOTT TREATMENT. By Louis F. Bishop, A.M., M.D., Clinical Professor of Heart and Circulatory Diseases, Fordham University School of Medicine, New York, etc. Third edition. Cloth, pp. 284. Price \$3.00. E. B. Treat & Co., New York, 1909.

There is a rapidly growing belief in the theory that many so-called heart and kidney diseases are primarily vascular affections and are in themselves merely secondary manifestations of these affections. The theory will be strengthened by the third edition of Dr. Bishop's book in which he divides cardiovascular disease into three types—those with primary high pressure, those with primary low pressure and those with secondary low pressure following high pressure.

A thoroughly progressive physician of today will find a sphygmomanometer quite as indispensable as his thermometer.

An interesting feature in Dr. Bishop's discussion of the control of vascular tonicity is the statement of his belief in the existence of a vessel tone-maintaining function in the human brain analogous to a similar function affecting the voluntary muscles.

The latter part of the edition is devoted to a description and discussion of the Nauheim-Schott treatment by saline baths, resistant exercises and general hygiene—with some notes on several cases.

It is interesting to note that the principles of this treatment can be carried out in this country requiring more effort to be sure but with just as good results as at Bad-Nauheim.

DISEASES OF THE GENITO-URINARY ORGANS. By Edward L. Keyes, Jr., M.D., Ph.D., Clinical Professor of Genito-Urinary Surgery, N. Y. Polyclinic Medical School; Surgeon to St. Vincent's Hospital, etc. With 195 illustrations and 7 plates, 4 in colors. D. Appleton & Co., New York and London, 1910. Cloth, pp. 975. Price \$6.00.

Although this work may be considered as a revised edition of the old genito-urinary work first issued by Van Buren and Keyes, yet so many innovations have been introduced, even over the later editions, that this volume may be looked upon almost as supplementarily original in character. Indeed the classification and arrangement of subjects common to practically all of the older works on the subject have been entirely abandoned in favor of the ones that are here distinctly original. In fact one is almost surprised when he finds certain chapters on inflammation, tumors, etc., followed, instead of being preceded, by those on the anatomy and physiology of the organs under consideration. And yet in view of the appended chapter on operative surgery, perhaps the innovation may be timely.

Of the first few chapters, those on physical examination and cystoscopy seem particularly satisfactory, with the exception of a lapse of lettering in the figure on p. 63 that is repeatedly referred to in the description. The chapter on urinalysis is of course far short of what one would expect to find in a work on diagnosis alone.

Gonorrhea is naturally given much space and rightly so. Not much that is new is offered. The author takes occasion to place himself on the side of Horwitz in condemnation of the Janet irrigation method of treatment of acute gonorrhea—contrary to the fad of a decade ago. It is surprising that anything but the most vigorous criticism should find a place for the unhygienic practice of covering the meatus of the acute gonorrheic with cotton. One can scarcely conceive of a better way of promoting extension of the infection into the posterior urethra than by thus damming back Nature's attempted drainage. And yet this is mentioned as one of the cleanly ways of caring for the discharge.

More care might have been exercised in the reading of the manuscript of certain sections, as there are several notable examples of a confusion of terms, as for instance, toxins are spoken of where vaccines are meant, and again on page 197, in describing a method for urethral irrigation, the remarks are directed toward rectal irrigation.

Regarding the various tuberculin tests in the diagnosis of genito-urinary tuberculosis, the author does not hesitate to express his preference for the Moro skin test—a method that is at the present day admittedly inaccurate as compared with the subcutaneous injection which latter method has the added advantage of pointing the lesion by its focal reaction.

All told, however, the work is very complete for a single volume text on the subject and will doubtless remain, as it ever has been, one of the most popular of its sort, with the profession.

THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

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NUMBER 9

ORIGINAL ARTICLES

DERMATITIS PEDICULOIDES VENTRICOSUS

SYNONYM: GRAIN ITCH

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GRABILL, INDIANA

In the JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION for August, 1909, Dr. Rawles published an article entitled, "Dermatitis *Ditropinotus Aureoviridis* (Straw Itch)." After the article had gotten into circulation, Prof. F. M. Webster, Bureau of Entomology, Washington, D. C., wrote him relative to the entomologic nomenclature and asked for his material and data, which was sent him. He kindly adjusted the nomenclature and sent several citations in literature and personal letters from individuals who had suffered from the ravages of this mite.

The original material was sent to the Purdue University for identification of the mite, but owing to a very unfortunate misunderstanding, the mite was reported as the *Ditropinotus aureoviridis*, which accounts for the error in the entomologic nomenclature in the original paper.

Pediculoides ventricosus (Newport) was first discovered and reported by Newport at Gravesend, England, in 1849. It had also been found in France, by Jules Liechtenstein, of Montpellier, and described by him under the name of *Physo-gaster larvarum*. Webster, Bureau of Entomology, U. S. A., found and described the mite in 1882.

It seems that the ravages of this mite had never been fully determined in America until 1909; but since the discovery and studies of the

past year, and surveying the reports of previous years, we are prone to conclude that the troublesome humors spoken of in 1852, by T. W. Harris, who dates back to 1831, in his work on the barley joint worm, were caused by the *Pediculoides ventricosus*. About 1844, he states that children sleeping on beds made of barley straw were so troubled with this humor, caused by the bites and stings of the barley joint worm, that the beds had to be destroyed, and that the inflammation lasted several days after the barley joint worm had been exterminated.

In Europe there are several instances where mites have been known to attack man; but Webster says that in no instance is he able to say with certainty that it was the *Pediculoides ventricosus*.

In America we note instances in which individuals suffer from attacks of acute dermatitis after coming in contact with straw, dried grass and threshed grain.

Instances of rash have been noted where people have been engaged in the picking of berries where the straw had been used as a mulch. This has been noted since 1908, since the epidemic of *Isosoma tritici* first began.

In Pittsburg six men were engaged in unloading straw that was infested with the joint worm. The men and horses became inoculated and suffered rather a severe dermatitis.

In Columbus, Ohio, packers, using straw to pack crockery became afflicted with the dermatitis and the packers had to abandon the use of straw and use prairie hay.

In the upper Shenandoah Valley in Virginia, where the joint worm was abundant as far back as 1904, the attacks of dermatitis were attributed to "chiggers."

These dermatitis have been known by both physicians and the laity as "chiggers," but in reality, says Webster, the "chigger" inhabits

neither straw nor threshed grain, but is found in grassy and weedy places in the woods. Again the term "chigger" is very indefinite, as it really includes a number of different kinds of mites, mostly of the *Trombidium* family.

In order to determine the likelihood of those handling straws in the wheat field being attacked by the small red mites, often innocently mistaken for "chiggers" that abound among the harvested grain at this time, Mr. Wildermuth made a number of experiments to determine whether or not these mites were liable to attack man. In no case was he able to provoke an attack from them, even when they were confined upon the skin of the bare arm. On the other hand, examination of straws revealed the presence of *Pediculoides*.

This parasite, *Pediculoides ventricosus*, not only proves to be a parasite on the barley joint worm, but also on Angoumois grain moth, the peach twig borer in California, the wheat joint worm, the larvae of the locust, the bean weevil and the cotton boll weevil. This mite is a common weevil parasite in Mexico. It was found attacking the wood-boring beetle in 1902. This parasite was brought from Mexico to Texas by Hunter in 1902 to destroy the boll weevil. This experiment, however, was not a success, as the mite was destroyed by a small ant, thus acting as a natural check.

These references show the diffuse distribution of the parasite and its great variety of hosts, and under certain conditions might find epidemics of the dermatitis that is produced in the human.

To Doctors Goldberger and Schamberg are due the credit of discovering the mite, *Pediculoides ventricosus*, in the East. They discovered the mite, however, under vastly different conditions than obtains in the West. In the East, where this mite has existed for years, since 1831, its host insect was the Angoumois grain moth. During this Western epidemic, however, which began in the elevated portions of Virginia and had swept over the Western States, the host has been the wheat joint worm (*Isosoma tritici*).

The straw from the mattresses which were examined by Doctors Goldberger and Schamberg came from New Jersey. These mattresses were also examined by Mr. Wildermuth and he found many heads contained the grains infested with the Angoumois grain moth. This moth is a natural inhabitant of the Eastern slope.

From the investigation carried out by Mr. Wildermuth during the winter 1909-1910, he concluded that after the young female emerges from the mother, it takes from six to an indefinite

number of days to arrive at the stage of maturity, depending upon the temperature. In a temperature of 90 to 100, six days; 80 to 90, seven days; 70 to 80, nine days; 60 to 70, thirteen days; and 50 to 60, twenty-eight days. In a temperature of 50 or lower, he doubts if the mites develop.

The mites are very prolific; one female has been known to produce 270 young (52 in a single day), the first born being males, usually. The life of the mites varies with the temperature; low temperatures check the growth, hence lengthens the life. They survive for a short time only without food—the younger ones less than a day.

Definition.—A dermatitis caused by the *Pediculoides ventricosus* and characterized by an urticarial eruption, surmounted by a small whitish vesicle marking the center of the wheal, and attended by intense itching and constitutional symptoms, such as elevation of temperature, rapid pulse, general malaise, anorexia and enlargement of the superficial lymph glands. In severe cases albuminuria obtains.

In May, 1909, a very strikingly strange skin disease presented itself in this and surrounding country in epidemic form. Through the press notes it seemed to be quite general over the northern part of the United States, limiting itself to the wheat growing sections. The people generally affected were farmers, and those living in small villages and towns where straw is used in beds, under carpets and around stables to bed stock. Horses and cattle have been seen with a skin disease almost identical to that seen in man. The following incident led to an investigation as to the probable etiology:

A family had cleaned house, refilled the straw ticks of their beds and placed fresh straw under the carpets, and in about one week the family had developed this peculiar skin disease. In the beds was found a small, black fly, about the size of an ordinary gnat, which at first it appeared to be, but closer observation revealed that it was not of the gnat family. Upon examination of the straw, it was found that a large number of the straws were perforated; these perforations were through the bark of the straw, in the region of the joint, generally about two inches from the joint. The perforations were about the size of a small pin-hole and ranged in number from ten to thirty in a straw. Upon a section of the straw a small black fly was found under many of the openings through the bark.

Several straws were examined to ascertain if the flies possessed a piercing proboscis, and while

observing one which had just been taken from under the bark of the straw, through which there was no perforation over the fly, a small mite was observed crawling over the dead body of the fly.

Placing the bodies of several flies under the microscope and using a $\frac{1}{4}$ -inch objective and a No. 5 eyepiece, it was found that on nearly all flies over which the bark was intact a small parasite could be detected, these mites varying in number from two to four mites to each fly. Upon furthering the observations it was found that the dermatitis lasted after the flies had been observed and exterminated.

The following experiments were carried out to prove whether it be the fly or the parasite that was the etiologic factor in producing the dermatitis:

Six live flies were taken, upon which no parasites could be found; these were placed under a watch glass and bound upon the right arm, leaving them in contact with the skin for three hours. Upon the left arm four dead flies, on which living parasites had been observed, were placed under a watch glass and left in contact with the skin for three hours, after which the glasses were removed and results awaited. The right arm showed nothing. Upon the left arm there appeared within twelve hours four small wheals, the character and evolution of which are later discussed. To further the experiments, some fresh lesions of patients were scraped and the scrapings examined microscopically and two of the mites were found in the scrapings.

Symptoms.—Itching is the most prevalent and first symptom to attract the attention of the patient. It is most persistent and intense during the after part of the night. At about the time the itching is most intense there appears an urticarial eruption, accompanied, in severe cases, with general systemic symptoms, such as rise of temperature from 99 to 102; in one case the temperature rose to 103.8; the pulse rate is accelerated to 100, or as high as 119, in one case to 130. Intense headache, anorexia, nausea, in some cases vomiting, and a mild form of diarrhea. In severe cases some complain of general joint pains and backache: in these cases the urine was examined and albumin in small amount was found, but no casts or blood. When the acute symptoms disappeared so did the albumin.

Many patients who suffer from mild cases complain of nothing aside from the intense itching. If all straw is removed from the beds and house the symptoms will subside in one or two days and completely disappear in a few days more.

The Eruption.—If the term urticaria be used, the lesions may be divided into the following classes:

1. Urticaria papulosa
2. Urticaria vesiculosa
3. Urticaria pustulosa
4. Diffuse urticarial erythema

The third class of cases may be confused with varicella.

The lesion which is typical of the disease is the urticaria vesiculosa. The urticarial lesion varies in size from that of a split pea to a penny: it is surrounded by a pinkish halo, varying in intensity of color from a pale pink to a most bright pink. The "hive"-like lesion is at first blanched, but later becomes a rose-red color. It is elevated about 1 or 2 mm. above the skin surface, and is surmounted by a small vesicle containing a whitish fluid, marking the place of inoculation. The vesicle is about 1 or 2 mm. in diameter and elevated about 3 mm. above the surface of the urticarial lesion.

As the lesion grows old it goes through a process of evolution: (1) it is blanched and a central vesicle; (2) it is rose-red and the vesicle may become a pustule; (3) it generally recedes to the skin level with scab formation, due to scratching; (4) it leaves a brownish or greenish-yellow or purple spot on the skin surface. In debilitated patients the markings look not unlike faded indelible pencil marks. (This was noted in a patient suffering from pulmonary tuberculosis.) These discolorations may last for several weeks.

The anatomical location of the lesions is generally the back, sides and abdomen, and less frequently the arms and legs. The neck has very few lesions; the face, hands and feet have very few or none.

The number of lesions depends upon the number of parasites, ranging in number from very few to thousands; in some cases the back and abdomen have been almost a solid mass of lesions—new lesions on the top of old lesions, so having lesions in all stages of development.

The pathology of the disease can probably be explained by a toxic substance being injected into the skin by the pediculoides.

DIAGNOSIS

1. History of persons coming in personal contact with straw, either in mattresses, under carpets or handling it, or by individuals contaminated with the parasite: this straw must be infested with the *Pediculoides ventricosus*.

2. Hive-like wheals surmounted with a small whitish vesicle and surrounded with a pinkish halo, the lesions being more abundant upon the back, sides and abdomen.

3. The finding of the *Pediculoides ventricosus* in the scraping of fresh lesions.

4. In severe cases, malaise, anorexia, general joint pains and backache, nausea, sometimes vomiting and enlargement of the superficial lymph glands, all of which are in direct proportion to the number of lesions.

Differential Diagnosis.—*Urticaria*, the erythemas, scabies, varicella and in rare instances variola.

Complications.—The most frequent complication is a pruritis; the next is probably a dry eczema. Several cases of acute weeping eczema have been noted. Local abscesses may develop, due to secondary infection inoculated by the patient scratching.

TREATMENT

I. *Prophylaxis.*—1. By discarding the use of straw containing the larvae of the wheat straw worm.

2. By thoroughly disinfecting the straw mattresses and straw in use by subjecting it to steam or strong sulphur fumes in a tightly closed room for ten hours. Formaldehyd may be used for the same purpose.

3. If possible, by the eradication of the wheat straw worm by burning of the stubble and rotation of crops, but this cannot always be done.

II. *Medicinal Treatment.*—1. Medicinal treatment is useless unless the cause is removed. All cases will recover in a few days if the cause is removed.

2. Where the wheals are fresh and the itching is intense, a great amount of comfort can be obtained by prescribing the alkaline bath, which helps to neutralize the toxic substance of the bite, which is probably highly acid. The alkaline bath is made by the following method:

To six gallons of water placed in a tub, dissolve one of the following:

Bicarbonate of soda.....	8 or 10 ozs.
Carbonate of potassium.....	6 or 8 ozs.
Borax	3 or 4 ozs.

Stay in the bath about one-half hour at least.

Bland ung. zinc oxide U. S. P. is useful on pruritis and eczematous lesions.

It has been our experience that the following prescription relieves the skin of all of its patho-

logic condition after the parasite has inoculated the patient, though it is on the shotgun order.

	Gms.
Balsam peru	4
Sodii bicarb.	8
Sulphur precip.....	8
Ung. zinc oxide, qs. add.....	100
Mft. ung.	

Signa: Apply daily after alkaline bath.

We are indebted to Prof. F. M. Webster, Bureau of Entomology, for the correction of the entomologic data and literature placed at our disposal; also to Mr. Wildermuth, who, on behalf of the Bureau of Entomology, made us a personal visit and offered many valuable suggestions relative to technic.

A METHOD OF APPLYING THIERSCH GRAFTS TO THE ORBITAL CAVITY

FRANK A. MORRISON, M.D.

INDIANAPOLIS

Skin grafting within and about the orbit presents at times some difficulties which it is almost impossible to overcome. The irregularity of surface about the canthi and the inaccessibility as well as mobility of the stump after enucleation are obstacles which have taxed the ingenuity of the most skillful to overcome.

To accurately fit and retain in position the thin epithelial graft used to cover the denuded surface is frequently difficult to accomplish. In the hands of the writer the following method has given almost uniformly good results. Over the part to be covered, whether within or without the orbit, is laid a piece of sterile gutta percha tissue and an exact pattern made of this surface by the use of small scissors. This pattern is now removed and laid aside for future use. Next a piece of gutta percha tissue two or three inches square (for convenience of handling) is laid in a bowl of normal salt solution. The Thiersch graft is cut in the usual way but is allowed to remain upon the razor blade and transferred directly to the gutta percha tissue. To affect this the tissue is removed from the salt solution and spread evenly on a sterile towel. The upper surface of this tissue must be kept quite moist to facilitate the even application of the graft. The razor blade carrying the graft is dipped gently into the normal salt to loosen the adhesion between them preparatory to the next step. The graft is now applied, raw surface up, to the tissue by holding the edge with a small spatula and gradually drawing the razor backward and dislodging it. The

spatula is now brought into play and all wrinkles carefully smoothed. Should any difficulty be experienced a few drops of water sufficient to float the graft may be dropped upon its surface. The gutta percha tissue should now be lifted slowly by taking hold of one end and the excess of water on its surface allowed to drain away slowly. This will cause the graft to become intimately adherent to the surface of the tissue and permit handling without any fear of wrinkling or dislodgment. With a pair of small and sharp scissors the tissue and the adherent graft are cut at the same time to correspond to the size and shape of the pattern previously described. In case great accuracy is demanded the pattern may be placed beneath the tissue while this shaping is proceeding. The graft thus shaped, together with its companion piece of gutta percha, is now placed face down upon the surface to be covered and pressed into place with the spatula or any convenient instrument. Here the two may be left in contact or if desired the tissue may be removed by gently insinuating the edge of a spatula. It is surprising to see with what ease this may be done even in the deep recesses of the orbital cavity. In case of skin grafting within the orbit the writer has tried all the accepted methods but finds the following to give the best results in his hands. After the graft has been forced into position the gutta percha is allowed to remain and form a smooth surface between the graft and the retentive apparatus without danger of disturbing the raw surfaces. A splint is now formed by tak-

ing a piece of "white wax" as found in the shops, but which I am informed is a mixture of wax and paraffin, dropping it into a vessel of hot (not boiling) water until thoroughly softened, then molding it roughly into the shape of a large almond and dropping it into cold water to harden. This should now be trimmed and shaped by a knife to fit the orbit. In my own cases I have made the lower edge rather sharper than the upper to provide a sufficiently deep sulcus for the retention of the artificial eye. This splint is now again dipped quickly into quite hot water to soften the surface only, which is now smoothed and polished by the naked fingers to get rid of rough places which might tend to detach the graft. After being hardened by being plunged into cold water it is inserted. A pad and light bandage is applied over both eyes for two days. Each day the eye is dressed by removing pad and gently washing the edges of the lids and allowing some of the normal salt solution to flow into the orbit, but without removing the splint. On the third day the splint is removed but the gutta percha tissue is not disturbed, and the eye irrigated with normal salt and the splint re-inserted. This is repeated daily until the fifth day, when the gutta percha is removed and the splint permitted to rest in direct contact with the skin. The patient is then instructed to take care of the eye himself by removing the splint daily and irrigating with sterile normal salt. The splint is to be worn day and night for three weeks and then the artificial eye inserted.

FOLLOWING close after the report of the Carnegie Foundation concerning the low standard and general inefficiency of some of the Chicago medical colleges come exposures by Chicago daily papers concerning the manner in which many medical students have obtained their credentials for entrance to medical schools. It seems to be conclusively proven that any person, whether possessing educational qualifications or not, has been able to buy a certificate, signed by a principal of a high school, stating that the owner is duly qualified in educational requirements to enter medical colleges demanding a high school education as a requirement for admission. This exposure, together with the evidence which warranted the Carnegie Foundation in intimating that certain Chicago medical colleges are associated with the State Board of Health in fraudulently turning out and licensing doctors, shows

that the whole system of medical education and licensure in Illinois is rotten and that it is time for a house cleaning.

It is reported that the governor of Illinois, when asked to remove the secretary of the State Board of Health for inefficiency and questionable practices, said that it was not politic for him to do so because the secretary had too much influence with members of the legislature. If the daily papers of Chicago keep up the editorially pungent criticism of the political system which permits the existence of a traffic in medical diplomas and high school certificates it may be possible that the governor of Illinois will find it politic to change his attitude. At all events, Chicago should wipe out of existence the medical diploma mills, and one of the first steps in the purification process is to secure a new state board of health.



T. C. KENNEDY, INDIANAPOLIS,
President Indiana State Medical Association, 1910



EUGENE HAWKINS,
SECOND VICE PRESIDENT
GREENCASTLE.



THEODORE POTTER,
THIRD VICE PRESIDENT
INDIANAPOLIS.



E.M. VAN BUSKIRK,
FIRST VICE PRESIDENT
FT. WAYNE.



D.W. STEVENSON,
TREASURER
RICHMOND



F.C. HEATH,
SECRETARY,
INDIANAPOLIS.

THE FORT WAYNE SESSION

The Indiana State Medical Association will hold its annual session in Fort Wayne, Thursday and Friday, September 29 and 30. The last time the Association met in Fort Wayne was in 1896, and during the fourteen years that have since elapsed many changes in the city and in the Association have taken place. The Association had 1,358 members when it met in Fort Wayne in 1896, and Fort Wayne had a population at that time estimated at 30,000. Now the Association has 2,546 members and Fort Wayne has a population of 65,000.

The older members of the Association will remember that the last Fort Wayne session was the first session which in many years had been held away from Indianapolis, and it was freely predicted that migration would kill the Association. Instead of killing the Association the Fort Wayne session was a record breaker, and was the beginning of a growth in numbers and interest which has continued ever since. At that time the Fort Wayne Medical Society had a membership of 61, and it had the distinction of being one of the large and progressive medical societies of the state. It welcomed the State Association with a warmth of cordiality and wealth of hospitality which went far toward the creation of a closer union of medical men over the state, and the development of a greater field of usefulness of the Association through the increased interest and enthusiasm in scientific work which migration seems to have stimulated. Now the Fort Wayne Medical Society, grown to a membership of 112 and still one of the largest, most active and most progressive societies in the state, again welcomes the Association and promises to repeat the performance of fourteen years ago by giving the visiting physicians a welcome that will do credit to a city noted for its generous hospitality.

THE EARLY HISTORY OF FORT WAYNE

Fort Wayne is the metropolis of northern Indiana, and is called "the summit city" because it occupies the highest of the land in Indiana. Its elevation above sea level is 775 feet. Every schoolboy is familiar with the fact that Fort Wayne is situated at the junction of the St. Joseph and St. Mary rivers, which unite to form the Maumee. He is also familiar with the fact that Fort Wayne is rich in aboriginal tradition

and of absorbing historic interest. Long before the foot of the white man had pressed its virgin turf it had existence as Ke-ki-on-ga, the "central city" of the once powerful and warlike Miamis, who held dominion over the region. It was early known to the intrepid French explorers and voyageurs, who penetrated the great wild empire of the Northwest in the seventeenth century, and there is almost conclusive evidence that the brave



A. P. BRUCHMAN, Fort Wayne, Chairman Committee on Arrangements

and enterprising LaSalle had passed through Ke-ki-on-ga on one of his expeditions to the Southwest.

The military importance of the place was early recognized by both French and English, and each nation at different times in the eighteenth century, prior to the coming of Americans, had built forts and maintained garrisons, where now stands Fort Wayne. It was not, however, until 1794 that the Fort Wayne of to-day had its real beginning. In the fall of that year General An-

thony Wayne, after inflicting crushing defeat on the hostile Indians at the battle of Fallen Timbers, near Maumee, Ohio, came to Ke-ki-on-ga, and upon an eminence overlooking the confluence of the St. Mary and St. Joseph rivers, threw up the stockade that was given his name and established the authority of the American government. Fort Wayne remained for a long time a military post and trading point with the Indians, and passed through the savage conspiracies and the

Wayne was platted as a village and in 1829 it was incorporated, having at that time a population that was probably less than 300. In 1840 Fort Wayne, with a population of 2,080, was chartered as a city, and three years later the Wabash and Erie canal, a great engineering feat in those days, was completed, and Fort Wayne's rapid progress to real greatness began in earnest. Early in the fifties opened the epoch of steam railroads, and with them began the industrial de-



Anthony Hotel—Headquarters Indiana State Medical Association, Fort Wayne Session

trials and dangers of the Indian wars incident to the conflict between the United States and Great Britain in 1812, and saw finally the power of the savages in the region broken forever.

Then came the period of civic development. About the fort had sprung up a considerable frontier village, and at the close of the war with Great Britain agricultural settlers began to occupy and cultivate the land. In 1822 Fort

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FORT WAYNE'S ACHIEVEMENTS

The achievements of Fort Wayne, in commerce, in manufacture, in education, in religious affairs, in civic progress, in public improvements, and all things else that operate to fix her status as a

prosperous and progressive city and a cultured and ambitious community, have been notable.

The city proper covers nine square miles of territory. Its greatest distance north and south is three and one-half miles and from east to west three and one-quarter miles.

Railways and Streets.—Fort Wayne has seven lines of steam railway and an equal number of electric interurban railways, all of which radiate in every direction from the city, and many miles of perfectly constructed and well operated city lines. There are fifty miles of well paved streets, of which over half is of asphalt and the balance vitrified brick.

dener has added such artificial embellishments as contribute to convenience and enjoyment. An overflowing artesian well spouts a copious stream of pure water from a great depth. Splendid driveways, a bicycle and automobile speedway, abundant flowers, a wealth of shrubbery and numerous other beauties and attractiveness combine to make it as fine a breathing place as could be desired. Every portion of the city has a well kept recreation place, and it is worth noting that in Fort Wayne parks the pleasure of visitors is not marred by "keep off the grass" signs.

Robison Park, a beautiful resort maintained by the street car company, is situated upon the St. Joseph River, seven miles north of the city.



Elks' Club—General Meetings (Fort Wayne Session) Will Be Held in This Building

Parks.—There are located in different sections of the city eight beautiful parks for the recreation of Fort Wayne's people, and affording healthful playgrounds for its children. The largest of the city's parks, Swinney Park, contains fifty-one acres, and it is one of nature's choicest and best preserved spots. It is located upon the St. Mary's River, whose meandering course encloses it wholly upon two sides and partly upon a third. A large natural grove of stately forest trees affords a picnic ground of rare beauty and attractiveness, to which the art of the landscape gar-

It is reached by a double-track electric line over a singularly beautiful route, which for the most part follows the course of the river and is flanked on the other hand by the old canal. It is a beautiful tract of 240 acres, the larger part of which is wooded. All modern features of a summer resort are found there, including a large and perfectly appointed theater. It is a favorite resort not only of Fort Wayne residents but excursionists from all accessible points.

Fort Wayne has taken up the playground movement in earnest and already there are several

spacious playgrounds in various sections of the city, all equipped with appliances for the entertainment and amusement of the children, and properly safeguarded by attendants.

Schools and Churches.—Fort Wayne has eighteen ward schools aside from the high and manual training school. It also has the Indiana School for Feeble Minded Youth, the Concordia College, the Bible Training School, the Art School, two business colleges, and numerous

caring for from 1,300 to 1,500 medical and surgical cases yearly. The Hope Hospital has a capacity of 75 beds and cares for from 900 to 1,000 cases each year. A model training school for nurses is a part of the institution. The Lutheran Hospital is a new, entirely up-to-date, fire-proof structure, with 100 beds and cares for from 900 to 1,000 patients each year. It maintains an excellent training school for nurses. St. Roche's Hospital, on a beautiful, healthy, high spot,



Fort Wayne's Million Dollar Court House

smaller educational institutions. There are 49 churches, of which 25 are Protestant, 11 Lutheran, 12 Catholic and 1 Jewish. Of parochial schools the Lutherans maintain 9 and the Catholics 10.

Hospitals.—The hospitals are four in number, well located from a sanitary standpoint, modern in appliances and progressive in practice. The oldest institution is the St. Joseph Hospital, founded in 1869, with a capacity of 100 beds,

overlooking the city, is open for consumptives only. The isolation hospital, located just outside of the city limits, is a commodious brick structure, having all modern, necessary and scientific appointments for the detention and treatment of virulent contagious diseases.

Public Buildings.—The public buildings of Fort Wayne confer a distinction of which the city is pardonably proud. The Allen County courthouse, erected at a cost of a million dollars, is one

of the most beautiful specimens of architecture in the country. The United States postoffice, the city hall, the high school building and the Carnegie Library are imposing, and examples of good architecture. The new nine-story Anthony Hotel is a monument to the enterprise of Fort Wayne citizens who own it, and it is rated as one of the best managed hotels between New York and Chicago. The new Scottish Rite Cathedral, the finest building in the world devoted exclusively to Scottish rite masonry, is beautiful in design throughout, and it, with the courthouse,

the largest manufactory of hosiery in the United States; and the Fort Wayne Steel and Iron Mills, employing about 500 men and having a pay roll of over \$40,000 per month. A large number of other business enterprises, each employing from 100 to 300 men, also add to the commercial activity.

Clubs.—The Commercial Club represents the associated business interests of the city, and it is also one of the social clubs of the city. It occupies a well appointed building. The Elks' Club is also one of the social clubs of the city, where



Fort Wayne Public Library

form two conspicuous "show places" of a city that boasts of many fine buildings.

Some Large Commercial Enterprises.—Among the big business enterprises of Fort Wayne are the Pennsylvania Railroad, which disburses about \$250,000 each month to over 3,000 men; the Bass Foundry and Machine Works, the largest car wheel manufactory in the world, employing from 1,200 to 1,500 men, and having a monthly pay roll of \$70,000; the Fort Wayne Electric Works (General Electric Co.), employing 1,200 men and paying out in wages each month the sum of \$75,000; the Fort Wayne Knitting Mills,

hospitality is dealt with a lavish hand. The new Scottish Rite Cathedral partakes of many of the features of a club, and is constantly open to members of the order and their friends.

FORT WAYNE'S WELCOME

For this year's session of the Indiana State Medical Association Fort Wayne extends a cordial welcome to all the members of the Association and their friends, and nothing will be left undone which will add to the comfort, pleasure, and profit of all who attend. The scientific program is an interesting one, and the Committee on

Arrangements has provided social features which will add to the pleasure of the visitors and general success of the session. The ladies are especially invited, and entertainment has been arranged for them for the period when scientific meetings are in session. The Commercial Club, the Elks' Club and the Scottish Rite Cathedral will be open to visitors, and cards entitling the owner to the privileges of these clubs may be obtained from the Committee on Arrangements. The hospitals

scientific meetings early the next morning. The Committee on Arrangements has provided no entertainments, clinics, or junketing trips to interfere with the scientific meetings, which are considered first in importance, but those visitors who care to come early or stay over for the purpose of visiting some of the hospitals, large manufacturing establishments, public buildings, or other places of interest, will be welcomed and afforded every facility for carrying out their



Commercial Club

will keep "open house" for physicians and extend cordial welcome.

Fort Wayne is noted as a good place to go, on account of the cordiality and generous hospitality afforded to all visitors, and the welcome which the doctors receive will be in keeping with the reputation established. It is especially desired that the members of the Association come early, with a view to attending the smoker on Wednesday night, September 28, and for the further purpose of being on hand for the opening of the

plans. The hospitals are of particular interest to medical men, and Fort Wayne has reason to be proud of her hospitals and the character and amount of work done in them. As a surgical center Fort Wayne is second only to Indianapolis, and members of the Association who are in the city before or immediately following the annual session of the State Medical Association can be assured of witnessing some excellent surgical and medical clinics.

PLACES AND TIME OF MEETINGS

The new Anthony Hotel will be the general headquarters of the Association. The entire second floor, together with the spacious corridors overlooking the main floor, will be devoted to the commercial exhibits and registration. The adjoining ball room will be the place of meeting for the House of Delegates and the meeting of county society officers. The regular scientific meetings of the Association will be held in the

one vouch for you. Members who are delegates should show credentials, and will then be given a delegate badge. Members having ladies with them should register the ladies and receive ladies' badges.

The registration clerks are expected to give information and reasonable assistance to any members of the Association, but in addition to this the members of the Fort Wayne Medical Society, every one of whom will wear a designating badge,



Government Building, Fort Wayne

Elks' Club, one-half block distant from the Anthony Hotel.

Upon arriving in the city members of the Association are requested to register at the headquarters (second floor, Anthony Hotel), where badges and tickets to all entertainments will be furnished. Registration will be by membership card, in accordance with the provisions of the constitution and by-laws of the Association, so be sure to bring your card with you or have some

will take pleasure in seeing that the wants of all visitors are properly cared for.

HOTELS

Visitors will find hotel accommodations to suit every taste and purse. Among the hotels are the following: Anthony Hotel, European plan (table d'hôte meals if desired), capacity 190, rates \$1.50 and upward; Wayne Hotel, capacity 120, American plan \$2.50 to \$3.50, European

plan \$1.50 to \$2.50; Randall Hotel, capacity 75, American plan \$2.00 to \$2.50, European plan 75 cents, \$1.00 and \$1.25; Baltes Hotel (stag), capacity 95, European plan 75 cents, \$1.00 and \$1.25 (table d'hôte meals if desired); Alt Heidelberg (stag), capacity 50, European plan only, \$1.00 and upwards; Rich Hotel, capacity 40, American plan \$1.50 to \$2.00, European \$1.00. Besides these there are numerous smaller hotels affording good accommodations at reasonable rates. The Committee on Arrangements has provided a list of rooms in private families for those who wish to avail themselves of such accommodations. Members are urged to make reservations at the hotels or boarding places in advance, and thus avoid the delays and confusion incident to assignment after arrival.

friendships may be renewed and new friendships formed.

On Thursday evening there will be a vaudeville performance at the Temple Theater, which has been secured for the exclusive use of the medical profession and friends. This entertainment will not begin until 9 p. m., thus not conflicting with the address by Professor Hirst to be given at the Elks' Club at 7:30 p. m.

Automobile drives have been arranged for those who desire to avail themselves of such entertainment during the interim of meetings.

The visiting ladies will be given an automobile ride over the city on Thursday morning at 10 o'clock, a trolley ride to Robison Park Thursday afternoon at 2, and an automobile ride to Concordia College on Friday morning to witness a



Scottish Rite Cathedral

ENTERTAINMENTS

Fort Wayne is recognized as a city where sociability is a predominant feature, and visitors to the session of the Indiana State Medical Association can be assured of receiving the "glad hand" everywhere. The Fort Wayne Medical Society has provided social features that will not conflict with the scientific meetings, but fill in the spare time, and add to the entertainment and the spirit of good fellowship that should prevail.

On Wednesday evening, at 9 o'clock, in the main dining room of the Anthony Hotel, will be given a smoker. Good music, a few vaudeville stunts and a buffet luncheon are on the program. This will be an informal affair, and is intended as a "get together" entertainment, where old

drill and dress parade of cadets. A musicale at the Scottish Rite Cathedral in honor of the visiting ladies will be given at an hour to be announced later. On Thursday evening the ladies are invited to attend the vaudeville performance at the Temple Theater.

Tickets for all entertainments for members and ladies must be obtained at the time of registration. Such tickets will bear the owner's name, and are not transferable.

RAILROADS

It is unnecessary to publish railroad timetables, since seventy-five passenger trains, in and out each day, with hourly service on more than a half dozen interurban lines, north, east,

south and west, make it possible for members to come and go at their convenience. Members of the Reception Committee will meet all principal trains on Wednesday afternoon and Thursday morning. Members of this committee may be identified by the official badges.

OFFICIAL PROGRAM

Wednesday Afternoon, Sept. 28

Meeting of Presidents and Secretaries of County Societies and Councilors of the State Association.

Ball Room of Anthony Hotel. 3:30
to 5:30 p. m.

1. The President of the County Medical Society; How he can help to build up his Society. T. C. Kennedy, Indianapolis, President of the Indiana State Medical Association.

Thursday, Sept. 29.—Morning Session.

General Scientific Meeting, Elks' Club, 9 to 12 a. m.

1. President's Address. Medical Education. T. C. Kennedy, Indianapolis.

2. What Indiana is Doing for Medical Education. W. L. Bryan, Bloomington, President of the Indiana University.

3. (a) The Wassermann Sero-reaction and Its Value to the Physician. W. T. Mefford, Chicago. (b) Serum Diagnosis of Syphilis. J. P. Simonds, Indianapolis.

Discussion opened by C. G. Beall, Fort Wayne, and C. F. Neu, Indianapolis.

4. Selection and Use of Catheters and Sounds. W. N. Wishard, Indianapolis.

Discussion opened by C. E. Barnett, Fort Wayne, and B. Erdman, Indianapolis.

5. Ophthalmia Neonatorum, Its Prevention. Geo. F. Keiper, Lafayette.



Cathedral of the Immaculate Conception

2. The Secretary of the County Medical Society; His duties and how he can build up his Society. C. Norman Howard, Warsaw, Secretary Koscusko County Medical Society.

3. The Business Management of Medical Societies. Frederick R. Green, Chicago, Assistant Secretary American Medical Association.

4. The Relation of the County Medical Society to THE JOURNAL. Albert E. Bulson, Jr., Fort Wayne, Editor of THE JOURNAL.

Wednesday Evening, Sept. 28

Meeting of the House of Delegates in the ball room, second floor of Anthony Hotel, 8 to 10 p. m.

Smoker in the main dining room, first floor of the hotel, 9 to 11 p. m.

Discussion opened by Albert E. Bulson, Jr., Fort Wayne, F. C. Heath, and J. N. Hurty, Indianapolis.

6. Migraine. Chas. F. Neu, Indianapolis.

Discussion opened by G. W. McCaskey, Fort Wayne, and C. S. Bond, Richmond.

7. Clinical vs. Laboratory Methods in the Practice of Medicine. D. M. Green, Muncie.

Discussion opened by Chas. L. Botkin, Farmland, and Clay Ball, Muncie.

Afternoon

Meeting of the House of Delegates, Ball Room, Anthony Hotel, 2 p. m. General Scientific Meeting, Elks' Club, 2 to 5 p. m.

1. Rabies: History and Treatment. H. S. Thurston and H. R. McKinstry, Indianapolis.

Discussion opened by J. P. Simonds and Helen Knabe, Indianapolis.

2. Fracture of the Patella With Report of a Very Unusual Case. Paul J. Bareus, Crawfordsville.

Discussion opened by Edwin Walker, Evansville, and H. R. Allen, Indianapolis.

3. Arterio-Sclerosis. H. R. Lowder, Bloomfield.

Discussion opened by F. B. Wynn, Indianapolis, and John W. Gray, Bloomfield.

4. Bone Transplantation. David Ross, Indianapolis.

Discussion opened by A. M. Hayden, Evansville, and M. R. Austin, Anderson.

5. Malaria in Indiana. Ada Schweitzer, Indianapolis.

2. Blood Cultures in Typhoid Fever. Wm. Shimer, Indianapolis.

Discussion opened by F. B. Wynn, Indianapolis, and B. W. Rhamy, Fort Wayne.

3. (a) The Conservatism of Early Caesarian Section, O. G. Pfaff, Indianapolis; (b) Caesarian Operations in Indiana, G. W. H. Kemper, Muncie.

Discussion opened by Walker Schell, Terre Haute, and M. F. Porter, Fort Wayne.

4. Present Trend of Obstetric Surgery. G. B. Jackson, Indianapolis.

Discussion opened by T. B. Noble, Indianapolis, and L. P. Drayer, Fort Wayne.

5. Chain Sutures. J. R. Eastman, Indianapolis.



Fort Wayne High and Manual Training School

Discussion opened by G. W. H. Kemper, Muncie, and Alfred Henry, Indianapolis.

Evening

Address: The Probable Direction of Progress in Gynecology in the Immediate Future. Barton Cooke Hirst, Philadelphia, Professor of Obstetrics, University of Pennsylvania. At the Elks' Club, 7:30 to 8:30 p. m.

Vaudeville Entertainment, Temple Theater, 9 to 11 p. m.

Friday, Sept. 30.—Morning Session

Meeting of the House of Delegates, Ball Room of the Anthony Hotel, 8:30 a. m. General Scientific Meeting, Elks' Club, 9 to 12 a. m.

1. Autointoxication From the Alimentary Canal. P. B. Carter, Macy.

Discussion opened by J. H. Oliver, Indianapolis, and M. F. Porter, Fort Wayne.

Afternoon Session

General Scientific Meeting, Elks' Club, 2 to 5 p. m.

1. Differential Diagnosis Between Labyrinthine Suppuration and Cerebral Abscess. John J. Kyle, Indianapolis.

Discussion opened by L. F. Page, Indianapolis, and L. D. Brose, Evansville.

2. Movable Kidney. F. A. McGrew, Laporte.

Discussion opened by M. I. Rosenthal, Fort Wayne, and T. I. Olney, South Bend.

3. The Hygiene of Menstruation. Jane Ketcham, Indianapolis.

Discussion opened by J. M. Dimmen, Fort Wayne, and G. B. Jackson, Indianapolis.

4. Pathology, Symptoms, and Treatment of Burns. G. W. Anglin, Warsaw.

Discussion opened by J. B. Porter, Elkhart, and D. S. Linville, Columbia City.

5. The New Doctor. M. C. Kimball, Converse.

Discussion opened by John Spooner, Peru, and P. B. Carter, Macy.

Introduction of President-Elect.

The discussants have been chosen by the essayists this year instead of by the committee.

Papers are limited to twenty minutes and discussions to five minutes, except the one appointed to open discussion, who will be allowed ten minutes.

Those appointed to open discussion of papers are privileged and even urged to prepare written

REPORT OF OFFICERS AND COMMITTEES

REPORT OF SECRETARY

The total paid membership for 1910 to date is 2,546, not quite up to the high water mark of last year, although there will be some additions between now and the close of the year. Every county in the state except one has membership in our Association, although there are no societies in the counties of Brown, Ohio, Jasper, Starke, Warren, and Vermillion, these counties, except Starke, having one or more members each in the societies of adjoining counties.

In submitting this, my fourteenth and last annual report, I cannot refrain from referring to a few facts: First, that the membership has more than doubled while I have been secretary; second, that more than \$30,000 of your money has passed through my hands and been accounted for without the loss of a penny.



Main Building, Indiana School for Feeble-Minded Youth

discussions. All papers and written discussions must be turned over to the secretary immediately following reading.

The Committee on Pathology will give interesting demonstrations for a half hour preceding each session.

COMMITTEE ON ARRANGEMENTS

A. P. Buchman, chairman; K. K. Wheelock, B. Van Sweringen, Eric A. Crull, and Albert E. Bulson, Jr.

Dr. Jessie Carrithers Calvin is the chairman of the committee selected to arrange for the entertainment of the ladies.

and the affairs of the office have been conducted as economically as my own private business; third, that there has never been any friction or complaint or unpleasantness worth mentioning or remembering, but unvarying kindness and courtesy, for which I wish to thank the members, one and all. And I would add that, while the duties of the office have been at times detrimental to my best interests, interfering with my participation in the scientific work or with mingling with the members so freely as if unengaged, yet there have been formed many pleasant associations and it has not been without its compensations. One could not have held such a position so long without ever after feeling a sincere interest in the welfare of the Association and of all its members. In the words of Rip Van Winkle, "May you all live long and prosper."

F. C. HEATH, Secretary.

REPORT OF TREASURER

DAVID W. STEVENSON, Treasurer, in account with The Indiana State Medical Association.

DEBIT

To cash on hand Jan. 1, 1910.....	\$ 94.84
To cash from Secretary, dues collected.....	2,546.00
	<hr/>
	\$2,640.84

CREDIT

By cash to THE JOURNAL, 1910 subscriptions of 2,546 members, at 75 cents.....	\$1,899.50
By cash to councilors, accounts of 1909.....	173.80
By cash to F. C. Heath, balance of honorarium 1909	173.57
By cash to Cleary & Bailey, printing, 1910..	88.00
	<hr/>
Total	\$2,334.87
To balance on hand.....	305.97

Grand total\$2,640.84
Respectfully submitted,

DAVID W. STEVENSON, Treasurer.

REPORT OF COUNCIL

Owing to the fact that several of the councilors were taking vacations at the time a call for reports was made, it has not been possible to secure late reports from all of the districts, and in consequence it has been decided to defer the publication of detailed reports until later. The councilors made detailed reports in January, published in the April number of THE JOURNAL, and conditions have made little change since then.

In general it may be said that the condition of the medical societies in the various counties of Indiana is fairly satisfactory. Starke County is the only county in the state which has no membership in the State Association, and this county is not only isolated, with poor roads and few railroad accommodations, but has very few physicians. There are no societies in the counties of Brown, Ohio, Jasper, Warren, and Vermillion, but these counties have one or more members each in the societies of adjoining counties.

With few exceptions each member of the Council has visited every county medical society in his district at least once during the past year. Some of the councilors have made two visits to county societies. Each councilor has endeavored to stimulate interest and enthusiasm in medical society work, and assist county society officers in increasing membership in their respective societies. That the work of the councilors has been efficient is shown by the growth of county societies and the increase of interest in the scientific work. In many counties no society existed until organized by the councilor, and in other counties the society was "on paper" until the councilor stirred up a little life and interest in the organization.

It has generally been found that the greatest difficulty to be met in keeping medical societies active is that of securing programs to stimulate attendance and keep up interest. Those county societies having wide-awake officers have generally had no difficulty in securing programs and maintaining live and progressive medical societies. Therefore it has been the policy of the Council to urge county societies to choose their officers, and particularly the secretary, with a good

deal of caution. An enterprising, energetic and faithful county society secretary can do much toward making his county society a thoroughly active and progressive organization.

Many county societies have taken up the discussion of the business side of the practice of medicine and accomplished beneficial results for the members by adopting appropriate fee bills, and uniting upon a warranted course of action concerning various phases of public health service and medical practice for corporations, lodges, etc.

THE JOURNAL, published under the direction of the Council, has been issued at a slightly increased cost over last year, owing to an increased number of reading pages and increased expense for illustrations. The income of THE JOURNAL from the Association has been fixed, and is the amount that the bound transactions, formerly issued, cost the Association. The advertising income has remained about the same as it was last year. THE JOURNAL has continued the policy adopted at its establishment, to exclude all advertising not in accord with the principles laid down by the Council on Pharmacy and Chemistry of the A. M. A., and to conduct a journal that at all times shall conform to proper standards of ethics and be of scientific and practical value to the members of the Association. The indications are that THE JOURNAL will close the year with a larger number of reading pages for the year than ever before, and at an expense which denotes economy to the Association, and evidence of careful business management on the part of the editors. At the present increased cost of printing, it would be absolutely impossible to publish the Association proceedings alone in the form of bound transactions (such as furnished the members prior to 1908) for as little money as THE JOURNAL is now furnished to members. THE JOURNAL therefore represents a distinct economical saving to the Association aside from being a medium for conveying Association announcements and news, and being a practical scientific monthly medical journal of general interest to all members of the Association.

The Council has not been called upon to settle any ethical questions relating to membership in county medical societies or the State Association, and is pleased to report that peace and the utmost harmony and good fellowship exist in all of the societies of the state.

W. N. WISHARD, President.

ALBERT E. BULSON, JR., Secretary.

REPORT OF COMMITTEE ON NECROLOGY

During the past year our death list has not been a large one. Only a few counties have reported deaths. In a few instances I have derived information of the death of physicians from the secular press, and in all cases, where members or not, I have sent the names of all honorable deceased physicians of the state to THE JOURNAL and they have been promptly published.

As the names appear in print each month and are promptly read by members I do not deem it wise to take up space in this report by reproducing them, especially as the index at the close of the volume will give a complete alphabetical list.

G. W. H. KEMPER, Chairman.

REPORT OF COMMITTEE ON MEDICAL EDUCATION

The opinion of your committee concerning the status of medical education in this country is in accord with that of the Council on Medical Education of the A. M. A. as expressed in the conclusion of their report to the House of Delegates June 6, 1910. This conclusion reads as follows: "Although there is still much to be done splendid progress is being made, and we can all look forward to the future confident that within a few years medical education and medical licensure in this country will be on a satisfactory basis."

Indiana. While our school is in the first class, it is by no means what it should be, and, we may add, what it will be, in the near future if the members of the Indiana State Medical Association do their duty. The public is coming to believe that it is to their interest that all doctors be at least reasonably competent, and it is one of the first duties of the members of the profession to stimulate the development of this idea in the public mind.

We desire to quote herewith our approval from the introduction to the report of the Carnegie Foundation: "One of the problems of the future is to educate the public itself to appreciate the fact that very seldom, under existing circumstances, does a patient receive



Scenes in Robison Park

Something better than this may be said of medical education in Indiana. For we have now but one medical school and that school a department of the State University at Bloomington. The Council on Medical Education of the A. M. A. in their last report ranks this school in Class A. The entrance requirement in this school is two years of college work. The State Board deserves credit for coming to the aid of the school by making the two-year college standard the minimum for practice within the state. The practical value of the medical school of this action on the part of the State Board will be better appreciated by calling to mind the fact that of the 226 students attending this school last year 94 per cent. were from

the best aid which it is possible to give him in the present state of medicine, and that this is due mainly to the fact that a vast army of men is admitted to the practice of medicine who are untrained in sciences fundamental to the profession and quite without a sufficient experience with disease. A right education of public opinion is one of the problems of future medical education."

Medical education is expensive, therefore our university must be dealt with liberally by our legislature, and in return the university must deal liberally with her medical school.

A hospital under the complete educational control of the medical school is as necessary as are laboratories

of chemistry, pathology, etc. Not only must the school have a hospital under its educational control, but in addition to this the school should seek close affiliation with every hospital within the state in which first-class clinical work is being done. In the minds of your committee this affiliation is a close second in importance to the establishment of the school-hospital. Your committee wishes here to announce its full endorsement of that part of the report of the Carnegie Foundation which refers to the Indianapolis part of the school, which is as follows: "In order to make the school attractive to highly qualified students, it will be necessary (1) to employ full-time men in the work of the first two years, (2) to strengthen the laboratory equipment, (3) greatly to improve the organization and conduct of the clinical courses. The trustees have formally committed themselves to this policy. It would appear necessary for some years to regard the needs of the Indianapolis department as a first lien on the increasing income of the university, if the university is to make good the ideals indicated by its entrance requirements. It can do Indiana no greater service in any direction. That done, Indiana will be one of the few states that have successfully solved the problem of medical education."

We feel sure that the university will do its duty by the medical department if the people, who are the chief beneficiaries, will do theirs by the university.

The people of Indiana can have what they want in the way of medical education. It is the business of the medical profession to teach them what they need.

Bayard Holmes in a recent address (*Cin. Lancet-Clinic*, Aug. 6, 1910) well says: "An ideal medical school would be an ideal place for the state to work out the problem of self-preservation. The nation supports its war college; the state should as liberally support its college of peace. The nation supports a magnificent navy; the state should support with equal prodigality the laboratories for saving life and preventing suffering." Our people are quick to see, they have the courage of their convictions, they are not slow to act. Therefore the question as to the time that shall elapse ere Indiana successfully solves the problem of medical education rests in the hands of Indiana doctors, and that means that it rests in the hands of the Indiana State Medical Association. In the parlance of the day it is "up to us" and we must "get busy."

MILES F. PORTER, Chairman, Ft. Wayne,
CHAS. SOWDER, Indianapolis,
A. B. GRAHAM, Indianapolis,
T. B. EASTMAN, Indianapolis,
GEORGE D. KAHLO, French Lick,

Committee.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

Owing to the fact that the Legislature has not been in session during the life of the present Committee on Public Policy and Legislation, and that a new committee will be appointed before another session of the Legislature, no report and no recommendations are offered.

MILTON T. McCARTY, Frankfort, Chairman,
W. C. McFADDEN, Shelbyville,
J. P. SALB, Jasper,
C. H. FULLENWIDER, Mt. Vernon,

L. D. BROSE, Evansville,
S. B. MONTGOMERY, Cynthiana,
C. E. STONE, Shoals,
C. M. KENNEDY, Camden,
W. J. MITCHELL, North Vernon,
G. H. SMITH, Knightstown,
PAUL MARTIN, Indianapolis,
A. W. GIFFORD, Tipton,
R. E. HOLDER, Columbus,
C. P. COOK, New Albany,
O. W. McQUOWN, Marion,
J. E. KING, Richmond,
F. C. ROBINSON, Martinsville,
E. R. SISSON, Greenfield,
H. O. BRUGGEMAN, Fort Wayne,
T. J. CREEL, Angola,
O. C. NEIER, Indianapolis,
W. S. WALKER, Lafayette,
O. R. SPIGLER, Terre Haute,
R. B. DUGDALE, South Bend,
L. B. HILL, Seymour,

Committee.

REPORT OF COMMITTEE ON INEBRIETY

It being our opinion that a State Hospital for the control and treatment of Inebriates and Drug habitues should be established in Indiana, it was thought advisable to ask the Indianapolis Medical Society to devote one evening to the consideration of this subject. Accordingly, the regular meeting night of this Society, May 31, was very kindly given over to our committee, and an open meeting was held, which was well attended by both doctors and laymen, many women being present.

This meeting was addressed by James A. Collins, Judge of the Indianapolis City Court, from the legal and judicial standpoint; and Dr. F. W. Terflinger, Superintendent of the Northern Hospital for the Insane, Logansport, on the medical aspect. Other short addresses were made by quite a number of persons.

Dr. S. E. Earp, President of the Society, in opening the meeting called attention in a forcible manner to the need of such an institution. All the speakers declared themselves heartily in favor of the state assuming charge of this class of unfortunates. These addresses were well received by the audience and the press of the city generously gave very good notices of the proceedings.

Your committee believes that a public meeting of this kind should bear good fruit. There seems to be a growing public sentiment in favor of such institutions. Several states of the Union already have such hospitals and several others are making efforts in that direction. The tax-payers of Indiana ought not object to the state paying out money for this purpose when we are reliably informed that Massachusetts spent for the year 1908 over \$1,400,000, out of taxes to provide for prisoners, 94 per cent. of whom were recorded as intemperate by habit.

It is the opinion of very able physicians who have given this subject much thought and have written upon it, that inebriety is a disease and has a distinct pathology. There may be differences of opinion as to the nature of the malady, but certainly every physician who has given any serious thought to inebriety will admit that it is a condition at least in which heredity

and environment play an important rôle. It is a condition also which leads to poverty and the worst hygienic and sanitary surroundings, breeding discontent, disease and misery, not only to those who are its victims but also to all who by family ties or otherwise are associated with them. By its baneful effects on the human organism those who become excessive users of alcohol, cocaine, morphine, etc., are more susceptible to intercurrent diseases, and their years of life and usefulness are much shortened. It is believed that children begotten of parents who have become excessive users of alcohol or other narcotics are handicapped in the race of life, being either mentally or physically weak, or perhaps both.

There is no known drug which taken into the system will relieve the craving for drink. And our best efforts are thwarted because we cannot control our patient

to do so? And what would we think of our health officers if being assured that in certain localities there were cesspools of infection such as smallpox, scarlet fever, tuberculosis, etc., to which the previously healthy and susceptible victims are constantly coming and going, and they made no effort to remove such places and prevent the spread of disease and death?

One of the strong arguments advanced by our Medical Association for the establishment of a State Hospital for the Tubercular was the prevention of the spread of the disease by isolating so far as possible those afflicted, and in educating the public, both sick and well, as to the danger of scattering the tubercle bacilli and thus infecting others. The etiology of inebriety is as well known as that of tuberculosis, and why should we not take up the cry of prevention in this disease the same as any other and make an



Representative Residences of Fort Wayne

and keep alcohol from him. Too often his environment is bad (being poorly housed, fed, and in the worst possible hygienic surroundings) and we are powerless to change these conditions. We hear a good deal in these days about personal liberty, and that a man has a right to do as he pleases. To a certain extent this is logical, but when carried to the extreme it becomes necessary to make him feel and know that there are bounds beyond which he cannot go for his own good as well as that of others. If we see a man attempting suicide by drowning, shooting, or hanging, we have not done our duty if we have made no effort to rescue him; or if a man is about to inflict some terrible physical torture upon his fellow man, or some member of his family, would we think it his personal privilege

honest effort individually and collectively in the name of science to remove the source of infection?

At the present time there is no provision in this state for the control and treatment of those who have succumbed to the seductive influences of alcohol and other narcotic drugs to such an extent that they are no longer able to think or act intelligently for themselves, and who have become a nuisance and an expense to their families and the community in which they live, except the jail and workhouse, or insane hospital. And according to the best authorities both of these methods are not only inhuman but are acknowledged failures. It is the opinion of those most competent to speak upon this subject that State Inebriate Hospitals, properly conducted, offer the best solution of this most

perplexing problem. It is believed that early scientific treatment of these cases would result in many cures, and that others would be benefited by such treatment, thus ultimately saving many from crime and insanity. Such an institution ought to serve also as a source of education, deterring young persons from yielding to these habits.

Your committee would respectfully but most earnestly recommend, first, that the Medical Association of the great State of Indiana take advanced steps regarding this matter. We believe the time has fully come when our Society should declare itself in favor of removing this source of disease, misery, and death from our state by every means at its command, even

General Assembly and aiding in every possible manner the securing of the desired legislation.

A. L. WILSON, Chairman,
CARL G. VIEHR,
HERMAN A. BECK,
DAVID W. ROBERTSON,
DAVID ROSS, Committee.

REPORT OF THE COMMITTEE ON TUBERCULOSIS

In compliance with the laws of the Society and established precedent, we herewith submit our report on the tuberculosis question in so far as it affects our state and people.



Representative Residences of Fort Wayne

to the prohibition of the manufacture and sale of alcohol for beverage purposes.

Second, that the Indiana Medical Association again declare itself in favor of a State Hospital for the control and treatment of inebriety and drug addiction, and request the enactment of such a law at the next session of the Legislature. This to be with and by the consent and coöperation of the Committee on Public Policy and Legislation of our Association.

Third, the appointment of a special committee for the purpose of bringing this matter before the next

Because of the constant and earnest agitation of the subject for the past six years, we feel that much has been accomplished, and there is yet much to do.

We are proud to report the completion of a magnificent State Hospital for the treatment of incipient tuberculosis located near Rockville, in Parke County, Indiana; there we have accommodations for two hundred patients to be prorated to the several counties according to their population; this hospital compares favorably with the best institutions of its kind in the country; it is complete in every detail and convenience; it is furnished and ready for the reception of

patients, but must remain closed until the next legislature makes a sufficient appropriation to open it; this oversight or neglect on the part of the last legislature seems to have been very expensive, from both a financial and humanitarian standpoint.

We point with pride to the good work in the treatment and prevention of tuberculosis, that has been and is being done by the several day camps established in several cities of the state by the Tuberculosis Relief Committee of the American Red Cross Society; this work is directly and actively in the hands of the several anti-tuberculosis societies, the Associated Charities and the local medical fraternities, together with the local health authorities of the several cities.

Their work speaks for itself; they have reduced the local mortality and inaugurated a very effective campaign in the prevention of tuberculosis.

this, we believe, will be found a very fertile soil for the implanting of the facts of hygiene, both personal and domestic.

We would recommend the enactment of an efficient and effective law requiring the medical inspection of the schools of our state, believing it would be a great factor in reducing the mortality in school children from tuberculosis; and in that connection we would earnestly urge the necessity of establishing open-air schools for the tuberculous child; this means of treatment, we know, is effective as an aid to a cure and enables the child to continue a modified course of school work.

In connection with our magnificent hospital for incipient pulmonary cases, at Rockville, Indiana, we would urge the establishment of a separate ward for the treatment of surgical tuberculosis in children, of



BROOKSIDE—Suburban Home of Hon. John H. Bass

We point with pride to the decrease in the annual death rate from tuberculosis in Indiana in the past two years, due, we believe, to the continuous campaign of education on this subject that has been waged by the various health commissioners and newspapers of the state to the lay population; this work, we believe, should be continued.

We respectfully call your attention to the very efficient and effective work being done by the very active and efficient Board of Health in Indianapolis, in its campaign of medical inspection of schools; this work has been a great factor in teaching the school children the elementary principles of hygiene in so far as it applies to preventive measures to be taken, especially in its application to infectious diseases.

We would recommend the teaching of elementary hygiene as a part of the required courses in the public schools of Indiana, and that especial emphasis be placed upon the prevention of tuberculosis in children;

which we have at least two thousand neglected cases in Indiana, to whom a cure and relief can be given; thereby aiding very materially in restoring them to health and active useful life.

We would recommend the strict enforcement by the various health commissioners of the state, of that section of the health laws which requires the reporting (for record only) of all cases of tuberculosis; this we believe to be urgent.

We would earnestly recommend the establishment and creation of a hospital for advanced or hopeless cases of tuberculosis in Indiana. We are compelled to point with shame to the fact that there is only one small hospital in Indiana where the poor, hopeless cases can go and die. We do not need many more laws, but a more strict enforcement of what we have.

We know by experience and observation that tuberculosis is infectious, preventable and curable in Indiana, as well as other states; that climatic conditions

alone are not essential, but strict supervision of the individual case and an early clinical diagnosis of the same.

With the coöperation of the united medical profession of Indiana much has been accomplished, but more remains to be done. It is, after all, a campaign of education, not only of the laity but the profession at large, in the prevention of this great white plague. When we have accomplished prevention we believe we have solved the question in a humanitarian way.

F. A. TUCKER, Chairman,

J. H. WILLIS,

GEO. B. LAKE,

H. J. FERNALD,

J. C. BLOSSOM,

Committee.

REPORT OF COMMITTEE ON PREVENTION OF VENEREAL DISEASES

The Committee on the Prevention of Venereal Diseases is deeply impressed with a sense of horror at

Ignorance is one of the greatest curses of mankind, if not the greatest, and has the most to do with the progress of venereal diseases, and should be our first point of attack. It is a strange fact, but none the less true, that darkness, mental and moral, defends itself against light. Men and women object to being taught the truth about venereal diseases. Apparently they would rather suffer the leprous effects of the venereal plagues, bring blind and idiotic children into the world, and supinely watch the overwhelming onrush of darkness onto humanity than to apply themselves to the problem of eliminating the degenerative element.

It is the duty of those who know the evil better, to instruct the ignorant and the indifferent regardless of their desires, and the crass neglect in allowing children to stumble blindly into the abyss of disease must be exposed by a campaign of education. Children must be taught the functions of their generative organs as they are taught the functions of the heart, lungs and stomach. They must be taught to avoid syphilis and gonorrhea as they are taught to avoid



St. Joseph's Hospital

the terrible progress of venereal infections and urges the members of the medical profession to enter upon a campaign of publicity and education regarding these diseases.

The percentage of our American manhood affected at some time in life with venereal diseases is startling in the extreme; is, in fact almost unbelievable. It is unnecessary that we should detail the course of infection, how the man who visits a house of ill-fame or cohabits with a harlot transmits the disease to another, how the woman in turn transmits it to many other men, and how the disease goes on to the hundreds and thousands in the same manner and to the unsuspecting wives and the innocent children. It is unnecessary that we should repeat the fearful effects of these diseases on the male and female generative organs, on the eyes, and on the brain. It is our purpose here to suggest a remedy which is designed to bring these facts forcibly to the public.

indigestion, colds, and overexertion. There are two places in which this can be done, in the home and in the schoolroom. In both there should be instituted and maintained a course of instruction.

However, the evil-risking and the evil-demanding elements must be controlled, and for them there is also a remedy.

For the evil-risking, shame is the weapon. And for shame, publicity is the most effective weapon. For the evil-demanding, there is the prison.

A partial solution of the problem of the venereal plagues is then:

First, the establishment in the public schools of a compulsory course of instruction in the physiology and diseases of the generative organs.

Second, the establishment of a system of medical inspection, whereby a certificate of freedom from venereal diseases must be obtained from a Board of Phy-

sicians that can be depended upon to do their duty, before receipt of a license to marry.

Third, the registration of all cases of venereal diseases, the same as with other infectious diseases.

Fourth, the quarantine of all dangerous cases of venereal diseases, especially such as prostitutes and public women.

Fifth, the punishment by imprisonment of any wilful transmittor of a venereal disease.

Sixth, the punishment by revocation of license of any physician concealing any case of venereal disease or otherwise neglecting duties imposed by the statute.

Probably these measures seem stringent, but in view of the frightful rate at which venereal infections are increasing, are they not justified?

Surely with a pest so prevalent and with such disastrous results we cannot be too severe. If this "plague" is allowed to continue with its frightful rapidity, unhampered and unchecked, the time will come when we will be forced to take action and possibly may have to resort to more drastic methods in an effort to control and expunge these maladies.

With the above in force, the first means toward the solution of the problem have been inaugurated. The

this phase of our state meetings by the American Medical Association and the marked recognition of the originator of the pathologic exhibit, Dr. F. B. Wynn, by that body. Too much credit and praise cannot be given Dr. Wynn for his energy, originality and faithfulness in developing the work of the Pathologic Committee and for the magnificent stimulus he has given scientific medicine in this state and this Association.

The plan in past years has been to gather a collection of pathologic specimens from any and all sources and present them in a separate room. For the past few years, instead of the large and rather indiscriminate exhibition, a selected group of specimens, illustrating a few lesions or pathologic processes, has been shown, each specimen carefully labeled and so far as possible always in the care of some one familiar with them to demonstrate them to all who cared to study them. It has been thought best to change the plan this year and adopt a new one which has been tried at other meetings and found very satisfactory. We propose to have a series of short demonstrations of diagnostic and experimental methods, extremely practical in their application and bearing on medicine, given by experts and given at a time and place which will



Hope Hospital

greater part of mankind is either good or cautious and an evil needs only to be thoroughly known to be avoided by the better element.

It is the committee's intention to endeavor to influence every physician in our state and call upon them to do all in their power to prevent the further advance of these diseases, and we hope a practical start in this direction can be put into effect immediately.

H. A. MOORE, M.D., Chairman,
CURTIS BLAND, M.D.,
J. C. HOOVER, M.D.,
R. H. LEAVITT, M.D.,
G. REYNARD, M.D.,

Committee.

REPORT OF THE COMMITTEE ON PATHOLOGY

The work of the Committee on Pathology of the Indiana State Medical Association in the past years has been a source of profit to all those who attended the annual meetings of the Association and of very favorable comment by those active in the larger Societies. The best proof of this is the recognition given

enable every one to be present and still not lose any part of the regular program. These exercises will occur one-half hour before the regular morning and afternoon sessions at a place to be announced later. These exercises with the matter to be presented are as follows:

1. Negri bodies and the anatomical diagnosis of rabies from the brain. Care of the animal before death; securing the head; packing for transmission to the laboratory; making and staining smears of brain substance; description of Negri bodies; demonstration of stained slides showing these. Dr. J. P. Simonds, State Pathologist.

2. *Treponema (spirocheta) pallida*. Distribution throughout the body; most frequent habitat; making of smears and securing of favorable material for the same; methods of staining; description of organism; diagnostic peculiarities; sources or error in staining and recognizing; demonstration of slides showing the organism by direct and dark ground illumination. Dr. J. R. Thrasher, Indianapolis.

3. Blood vessel surgery. Exhibition of a number of specimens showing the result of surgical anastomoses

of arteries; veins, veins to arteries and arteries to veins. Technic, practical value; physiologic and surgical aspects. Exhibition of animals on which these procedures have been done. Dr. J. V. Reed, Indianapolis.

4. The Wassermann reaction. Technic and end reaction; meaning of haemolysis; significance of reaction. Dr. William Shimer, Indianapolis.

5. Autopsy. If a subject can be secured, Dr. H. A. Alburger, of Bloomington, will conduct a post mortem examination.

R. H. RITTER, Chairman.
J. V. REED,
J. R. TRASHER,
J. E. HIATT,
J. H. KERTH,

Committee.

DELEGATES TO THE FORT WAYNE SESSION
OF THE INDIANA STATE MEDICAL
ASSOCIATION

COUNTY.	NAME.	ADDRESS.
Adams	H. F. Costello	Decatur
Allen	M. F. Porter	Fort Wayne
	C. R. Dancer	Fort Wayne
Bartholomew	J. W. Benham	Columbus
Boone	J. R. Ball	Lebanon
Blackford	M. M. Clapper	Hartford City
Carroll	D. A. McCleary	Deer Creek
Cass	G. D. Miller	Logansport
Clark	D. C. Peyton	Jeffersonville
Clay	S. G. Hollingsworth	Brazil
Clinton	J. A. Kent	Mulberry
Dearborn	F. M. Mueller	Lawrenceburg
Decatur	Curtis Bland	Greensburg
Delaware	I. N. Trent	Muncie
Elkhart	E. E. Ash	Goshen
	E. M. Hoover	Elkhart
Fayette	J. R. Mountain	Connersville
Floyd	C. P. Cook	New Albany
Fountain	W. H. Dinsmore	Kramer
Fulton	C. L. Slonaker	Leiter's Ford
Grant	J. A. Mattison	Marion
Greene	E. T. Sherwood	Linton
Hamilton	F. A. Tucker	Noblesville
Hancock	C. K. Bruner	Greenfield
Hendricks	C. A. White	Danville
Henry	H. W. Greist	New Castle
Howard	J. W. Wright	Kokomo
Huntington	E. W. Poinier	Andrews
Jackson	A. May	Crothersville
Jefferson	G. E. Denny	Madison
Jennings	W. H. Richardson	Vernon
Johnson	R. E. Repass	Greenwood
Knox	E. Bowers	Vincennes
Kosciusko	P. G. Fernier	Leesburg
Lake	W. F. Howatt	Hammond
Laporte	J. W. Milligan	Michigan City
Lawrence	A. W. Dierking	Oolitic
Madison	L. O. Williams	Anderson
Marion	E. D. Clark	Indianapolis
	J. H. Oliver	Indianapolis
	A. C. Kimberlin	Indianapolis
	David Ross	Indianapolis
	J. A. McDonald	Indianapolis
	Allison Maxwell	Indianapolis
Marshall	E. E. Parker	Culver
Martin	Chas. E. Stone	Shoals
Miami	J. O. Ward	Peru

COUNTY.	NAME.	ADDRESS.
Monroe	G. F. Holland	Bloomington
Montgomery	P. J. Bareus	Crawfordsville
Morgan	A. S. Tilford	Martinsville
Newton	C. C. Bassett	Goodland
Orange	S. F. Teaford	Paoli
Owen	Allen Pierson	Spencer
Parke	O. E. Maddox	Rockville
Perry	C. M. Brucker	Tell City
Porter	R. D. Blount	Valparaiso
Posey	C. P. Barrett	Oliver
Pulaski	G. R. Thompson	Winamac
Randolph	G. Reynard	Union City
Ripley	J. R. Pate	Milan
Rush	C. H. Parsons	Rushville
Scott	W. C. McClain	Scottsburg
St. Joseph	W. A. Hager	South Bend
Shelby	G. I. Inlow	Blue Ridge
Spencer	D. V. McClary	Dale
Steuben	W. H. Waller	Angola
Sullivan	E. M. Deputy	Dugger
Switzerland	H. M. Thiebaud	Vevay
Tippecanoe	W. R. Mollitt	Lafayette
Tipton	M. V. B. Newcomer	Tipton
Union	G. Pigman	Liberty
Vanderburg	A. M. Hayden	Evansville
	H. T. Dixon	Evansville
Vigo	M. A. Boor	Terre Haute
	M. R. Coombs	Terre Haute
Wabash	L. E. Jewett	Wabash
Warrick	E. L. Youngblood	Boonville
Wayne	J. E. King	Richmond
Wells	F. A. Metts	Ossian
White	A. B. Gray	Monticello
Whitley	F. G. Grisier	Columbia City

CONSTITUTION AND BY-LAWS OF THE INDIANA
STATE MEDICAL ASSOCIATION

ARTICLE I.—NAME OF THE ASSOCIATION

The name and title of this organization shall be the Indiana State Medical Association.

ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purposes of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Indiana, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES

Component Societies shall consist of those county medical societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

SECTION 1. This Association shall consist of Members, Delegates and Guests.

SEC. 2. MEMBERS. The Members of this Association shall be the members of the component county medical societies.

SEC. 3. DELEGATES. Delegates shall be those members who are elected in accordance with this Constitution and By-Laws to represent their respective component societies in the House of Delegates of this Association.



Entrance to Swinney Park

SEC. 4. GUESTS. Any distinguished physician not a resident of this State who is a member of his own State Association may become a guest during any Annual Session on invitation of the officers of this Association, and shall be accorded the privilege of participating in all of the scientific work for that Session.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) Delegates elected by the component county societies, (2) the Councilors, and (3), *ex officio*, the President and Secretary of this Association.

ARTICLE VI.—COUNCIL

The Council shall consist of the Councilors, and the President and Secretary, *ex-officio*. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

ARTICLE VII.—SECTIONS AND DISTRICT SOCIETIES

The House of Delegates may provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such Councilor District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies.

ARTICLE VIII.—SESSIONS AND MEETINGS

SECTION 1. The Association shall hold an Annual Session, during which there shall be held daily General Meetings, which shall be open to all registered members, and guests.

SEC. 2. The time and place for holding each Annual Session shall be fixed by the House of Delegates.

ARTICLE IX.—OFFICERS

SECTION 1. The officers of this Association shall be a President, three Vice-Presidents, a Secretary, a Treasurer, and thirteen Councilors.

SEC. 2. The officers, except the Councilors, shall be elected annually. The President shall appoint the first Councilors to serve for one year, or until their successors are elected. The terms of the elected Councilors shall be for three years, those first elected serving one and two years, as may be arranged. All of these officers shall serve until their successors are elected and installed.

SEC. 3. The officers of this Association shall be elected by the House of Delegates on the morning of the last day of the Annual Session, but no Delegate shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who is not in attendance upon that Annual Session, and who has not been a member of the Association for the past two years.

ARTICLE X.—RECIPROCITY OF MEMBERSHIP WITH OTHER STATE SOCIETIES

In order to broaden professional fellowship this Association is ready to arrange with other State Medical Associations for an interchange of certificates of membership, so that members moving from one state to another may avoid the formality of re-election.

ARTICLE XI.—FUNDS AND EXPENSES

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall be fixed by the House of Delegates, but shall not exceed the sum of \$2.00 per capita per annum, except on a four-fifths vote of the Delegates present. Funds may also be raised by voluntary contributions, from the Association's publications, and in any other manner approved by the House of Delegates.



Entrance to Lindenwood Cemetery

Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be referred to the Finance Committee before action is taken thereon.

ARTICLE XII.—REFERENDUM

SECTION 1. A General Meeting of the Association may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered the House of Delegates shall submit such question to the members of the Association, who may vote by mail or in person, and, if the members voting shall comprise a majority of all the members of the Association, a majority of such vote shall determine the question and be binding on the House of Delegates.

SEC. 2. The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates.

ARTICLE XIII.—THE SEAL

The Association shall have a common Seal, with power to break, change or renew the same at pleasure.

shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

SEC. 3. Each member in attendance at the Annual Session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified, by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at that Session. No member shall take part in any of the proceedings of an Annual Session until he has complied with the provisions of this section.

CHAPTER II.—ANNUAL AND SPECIAL SESSIONS OF THE ASSOCIATION

SECTION 1. The Association shall hold an Annual Session at such time and place as has been fixed at the preceding Annual Session by the House of Delegates.



Residence of the Bishop of Fort Wayne

ARTICLE XIV.—AMENDMENTS

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the Delegates present at any Annual Session, provided that such amendment shall have been presented in open meeting at the previous annual session, and that it shall have been published twice during the year in the bulletin or journal of this Association, or sent officially to each component society at least two months before the meeting at which final action is to be taken.

BY-LAWS

CHAPTER I.—MEMBERSHIP

SECTION 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

SEC. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members,

SEC. 2. Special meetings of either the Association or of the House of Delegates shall be called by the President on petition of twenty delegates or fifty members.

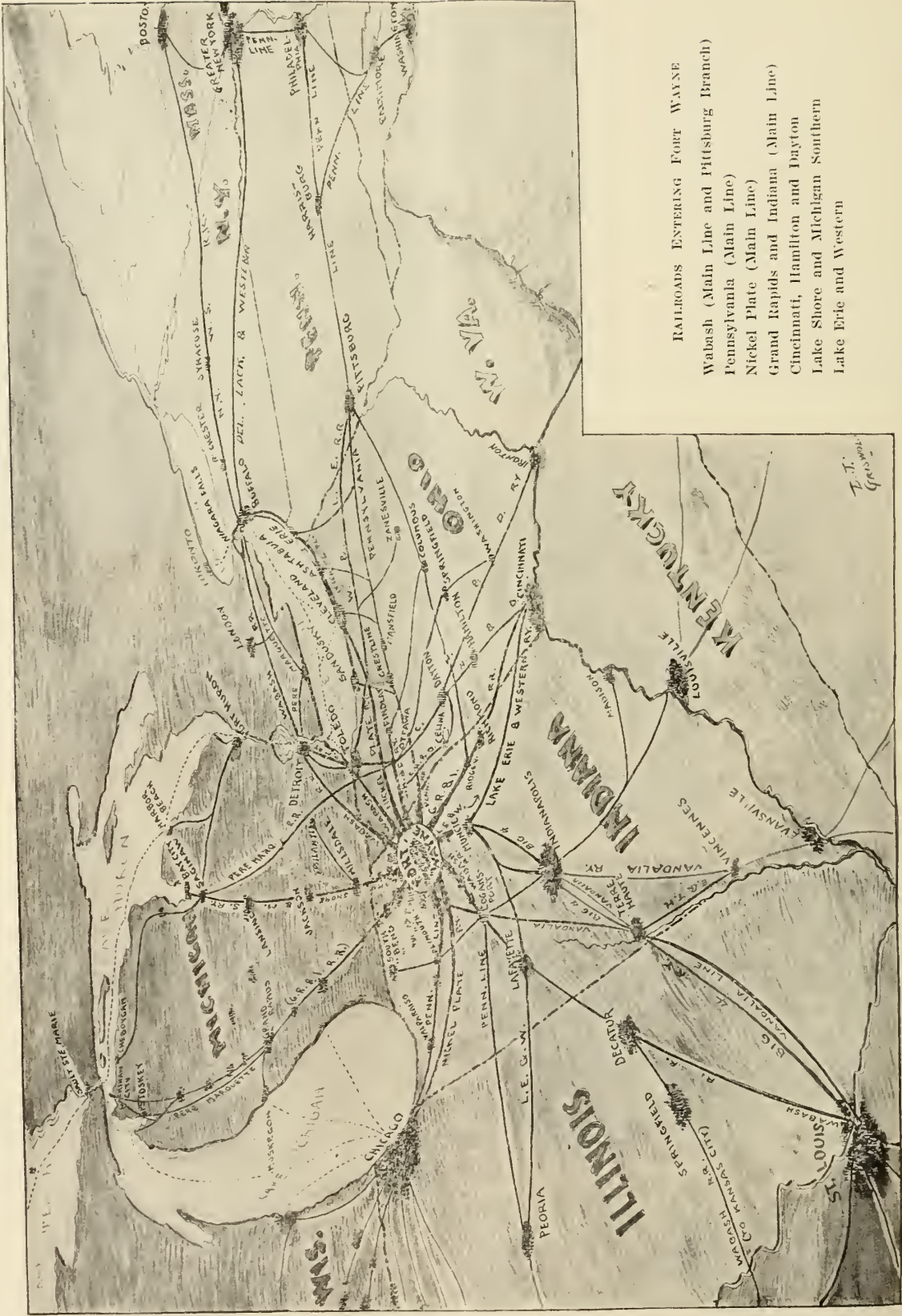
CHAPTER III.—GENERAL MEETINGS

SECTION 1. All registered members may attend and participate in the proceedings and discussions of the General Meetings and of the Sections. The General Meetings shall be presided over by the President or by one of the Vice-Presidents, and before them shall be delivered the address of the President and the orations.

SEC. 2. The General Meeting may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and public.

CHAPTER IV.—HOUSE OF DELEGATES

SECTION 1. The House of Delegates shall meet at 8 p. m. on the day before that fixed as the first day of the annual session. It may adjourn from time to time



as may be necessary to complete its business, provided that its hours shall conflict as little as possible with the General Meetings. The order of business shall be arranged as a separate section of the program.

SEC. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every 50 members, and one for each major fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws, shall be entitled to one delegate.

SEC. 3. Twenty delegates shall constitute a quorum.

SEC. 4. It shall, through its officers, Council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Session a stepping stone to future ones of higher interest.

SEC. 5. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public-health legislation, and to diffuse popular information in relation thereto.

SEC. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until every physician in every county of the State who can be made reputable has been brought under medical society influence.

SEC. 7. It shall encourage post-graduate and research work, as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.

SEC. 8. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

SEC. 9. It shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and By-Laws.

SEC. 10. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies, and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.

SEC. 11. It shall divide the State into Councilor Districts, specifying what counties each district shall include, and, when the best interest of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies, and no others, shall be members in such district societies. When so organized, from the presidents of such district societies shall be chosen the Vice-Presidents of this Association, and the presidents of the county societies of the district shall be the vice-presidents of such district societies.

SEC. 12. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

SEC. 13. It shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

CHAPTER V.—ELECTION OF OFFICERS

SECTION 1. All elections shall be by ballot, and a majority of the votes cast shall be necessary to elect.

SEC. 2. The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the General Session.

SEC. 3. Any person known to have solicited votes for or sought any office within the gift of this Association shall be ineligible for any office for two years.

CHAPTER VI.—DUTIES OF OFFICERS

SECTION 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for; he shall deliver an annual address at such time as may be arranged, and perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and, as far as practicable, shall visit by appointment the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Council shall select one of the Vice-Presidents to succeed him.

SEC. 3. The Treasurer shall give bond in the sum of \$1,500. He shall demand and receive all funds due the Association, together with the bequests and donations. He shall pay money out of the Treasury only on a written order of the President, countersigned by the Secretary; he shall subject his accounts to such examination as the House of Delegates may order, and he shall annually render an account of his doings and of the state of the funds in his hands.

SEC. 4. The Secretary shall attend the General Meetings of the Association and the meetings of the House of Delegates, and shall keep minutes of their respective proceedings in separate record books. He shall be *ex-officio* Secretary of the Council. He shall be custodian of all record books and papers belonging to the Association, except such as properly belong to the Treasurer, and shall keep account of and promptly turn over to the Treasurer all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the Annual Sessions. He shall, with the co-operation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and, on request, shall transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies and in the extension of the power and usefulness of this Association. He

shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment, collect the same, and at once turn it over to the Treasurer. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the House of Delegates.

CHAPTER VII.—COUNCIL

SECTION 1. The Council shall meet on the day preceding the Annual Session, and daily during the Session, and at such other times as necessity may require, subject to the call of the chairman, or on petition of three Councilors. It shall meet on the last day of the Annual Session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and a clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates.

SEC. 2. Each Councilor shall be organizer, peace-maker and censor for his district. He shall visit the counties in his district at least once a year for the purpose of organizing component societies where none exists; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the Annual Session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a properly itemized statement, but this shall not be construed to include his expense in attending the Annual Session of the Association.

SEC. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the rights and standings of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General Meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of component societies on which an appeal is taken from the decision of an individual Councilor, and its decision in all such matters shall be final.

SEC. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered, shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

SEC. 5. The Council, as the Finance Committee of the Association, shall have authority to appropriate money for and provide for and superintend all publications of the Association, and shall have authority to appoint an editor and such assistants as it deems necessary, and fix the amount of their salaries. All money

received by the Council and its agents resulting from the discharge of duties assigned to them must be paid to the Treasurer of the Association. The Council shall annually audit the accounts of the Treasurer and Secretary and other agents of this Association, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year and the amount of other property belonging to the Association, under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the Secretary or Treasurer the Council shall fill the vacancy until the next annual election.

CHAPTER VIII.—COMMITTEES

SECTION 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangement, and such other committees as may be necessary. Such committees shall be elected by the House of Delegates unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members, of which the Secretary shall be one, and shall determine the character and scope of the scientific proceedings of the Association for each session, subject to the instructions of the House of Delegates. Thirty days previous to each Annual Session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

SEC. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary. Under the direction of the House of Delegates it shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine. It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

SEC. 4. The Committee of Arrangements shall be appointed by the component society of the county in which the Annual Session is to be held. It shall provide suitable accommodations for the meeting-places of the Association and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Secretary for publication in the program, and shall make additional announcements during the session as occasion may require.

CHAPTER IX.—COUNTY SOCIETIES

SECTION 1. All county societies now in affiliation with this Association or those which may hereafter be organized in this State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall, on application, receive a charter from and become a component part of this Association.

SEC. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in

which no component society exists, and charters shall be issued thereto.

SEC. 3. Charters shall be issued only upon approval of the Council or House of Delegates and shall be signed by the President and Secretary of this Association. The Council or the House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

SEC. 4. Only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Councilor for the District if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Council, which shall decide what action shall be taken.

SEC. 5. Each county society shall judge of the qualification of its own members, but, as such societies are the only portals to this Association and to the American Medical Association, every reputable and legally registered physician who does not practice or claim to practice, nor lend his support to, any exclusive system of medicine, shall be entitled to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

SEC. 6. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council, and its decision shall be final.

SEC. 7. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a Board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

SEC. 8. When a member in good standing in a component society moves to another county in this State, his name, on request, shall be transferred without cost to the roster of the county society into whose jurisdiction he moves.

SEC. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the society in whose jurisdiction he resides.

SEC. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

SEC. 11. At some meeting in advance of the annual session of this Association each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, and the secretary of the society shall send a list of such delegates to the Secretary of this Association at least 30 days before the annual session. No one shall be entitled to a seat in the House of Delegates unless his credentials as a delegate shall have been presented to the Committee on Credentials at least ten days before the first meeting of the House of Delegates; provided, however,

that the credentials of the alternate may be accepted on the first day of the meeting of the House of Delegates if said credentials are signed and attested to by the president and secretary of the county society.

SEC. 12. The Secretary of each component society shall keep a roster of its members and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

SEC. 13. The fiscal year for the Association shall be from January 1 to December 31, and all assessments shall be for the fiscal year and payable in advance. The Secretary of each component society shall forward the assessment for his society, together with the roster of officers and members and list of non-affiliated physicians of the county, to the Secretary of this Association on January 1 of each year, and he shall promptly report thereafter the names of any new members elected to membership in his society, and promptly forward to the Secretary of this Association the assessment for such new members. The assessment shall be the same for all members and entitle the members to all the benefits, including the publications of this Association, from the time of paying the assessment to the close of the fiscal year only.

SEC. 14. Any county society which fails to pay its assessment or make the report required by February 1 of each year shall be held suspended, and none of its members or delegates shall be permitted to receive any of the publications of the Association or participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

CHAPTER X.—MISCELLANEOUS

SECTION 1. No address or paper before the Association, except those of the President and orators, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject, except by unanimous consent, except the first discussant, who shall be allowed ten minutes.

SEC. 2. All papers read before the Association or any of the Sections shall become its property. Each paper shall be deposited with the Secretary when read.

SEC. 3. The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

SEC. 4. The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

CHAPTER XI.—AMENDMENTS

These By-Laws may be amended at any Annual Session by a majority vote of all the delegates present at that session, after the amendment has lain on the table for one day.

LIST OF PRESIDENTS AND VICE-PRESIDENTS
OF THE INDIANA STATE MEDICAL ASSOCIATION
SINCE ITS ORGANIZATION

PRESIDENTS				C. A. Daugherty	South Bend	1893	1894
<i>Names.</i>	<i>Residence.</i>	<i>Elected.</i>	<i>Served.</i>	E. S. Elder	Indianapolis	1894	1894
				C. S. Bond			
				(acting president)	Richmond	1894	1895
L. H. Dunlap	Indianapolis	1849	1849	Miles F. Porter	Fort Wayne	1895	1896
W. T. S. Cornett	Versailles	1849	1850	J. H. Ford	Wabash	1896	1896
A. Clapp	New Albany	1850	1851	W. N. Wishard	Indianapolis	1897	1898
Geo. W. Mears	Indianapolis	1851	1852	J. C. Sexton	Rushville	1898	1899
J. H. Browne	Lawrenceburg	1852	1853	Walker Schell	Terre Haute	1899	1900
E. Deming	Lafayette	1853	1854	Geo. W. McCaskey	Fort Wayne	1900	1901
Madison J. Bray	Evansville	1854	1855	A. W. Brayton	Indianapolis	1901	1902
William Lomax	Marion	1855	1856	J. B. Berteling	South Bend	1902	1903
Daniel Meeker	Laporte	1856	1857	Jonas Stewart	Anderson	1903	1904
T. Bullard	Indianapolis	1857	1858	Geo. T. McCoy	Columbus	1904	1905
Nathan Johnson	Cambridge City	1858	1859	Geo. H. Grant	Richmond	1905	1906
David Hutehinson	Mooreville	1859	1860	Geo. J. Cook	Indianapolis	1906	1907
B. S. Woodworth	Fort Wayne	1860	1861	D. C. Peyton	Jeffersonville	1907	1908
Theophilus Parvin	Indianapolis	1861	1862	Geo. D. Kahlo	French Lick	1908	1909
J. F. Hibberd	Richmond	1862	1863	T. C. Kennedy	Indianapolis	1909	
John Sloan	New Albany	1863	1864				
S. M. Linton	Columbus	1864	1864	VICE-PRESIDENTS			
John Moffett				N. Johnson			
(acting president)	Rushville	1864	1864	(temporary)	Cambridge City	1849	1849
M. H. Harding	Lawrenceburg	1865	1865	L. Ryan			
W. Lockhart				(temporary)	Anderson	1849	1849
(acting president)	Danville	1865	1866	T. W. Florer			
Veirling Kersey	Richmond	1866	1867	(temporary)	Alamo	1849	1849
J. S. Bobbs	Indianapolis	1867	1868	C. Wallace			
Nathaniel Field	Jeffersonville	1868	1869	(temporary)	Indianapolis	1849	1849
Geo. Sutton	Aurora	1869	1870	A. Clapp	New Albany	1849	1850
R. N. Todd	Indianapolis	1870	1871	N. Johnson	Cambridge City	1849	1850
H. P. Ayres	Fort Wayne	1871	1872	L. Dunlap	Indianapolis	1849	1850
Joel Pennington	Milton	1872	1873	Dr. Farquhar	Wabash	1849	1850
Isaac Casselberry	Evansville	1873	1874	William Lomax	Marion	1850	1851
W. Hobbs	Knightstown	1873	1874	R. Curran	Indianapolis	1850	1851
R. E. Haughton	Richmond	1874	1875	William Davidson	Madison	1850	1851
J. H. Helm	Peru	1875	1876	W. W. Hitt	Vincennes	1850	1851
S. S. Boyd	Dublin	1876	1877	H. M. Dowling	New Albany	1851	1852
L. D. Waterman	Indianapolis	1877	1878	S. Grimes	Delphi	1851	1852
L. Humphreys	South Bend	1878	1879	J. Pennington	Milton	1851	1852
J. R. Weist	Richmond	1879	1879	Charles Parry	Indianapolis	1851	1852
Benj. B. Newland				William Byford	Evansville	1852	1853
(acting president)	Bedford	1879	1880	William Davidson	Madison	1852	1853
Thomas B. Harvey	Indianapolis	1880	1881	V. Kersey	Milton	1852	1853
Marshall Sexton	Rushville	1881	1882	T. Bullard	Indianapolis	1852	1853
Wm. H. Bell	Logansport	1882	1883	N. Johnson	Cambridge City	1853	1854
S. E. Munford	Princeton	1883	1884	James McClelland	Jeffersonville	1853	1854
J. H. Woodburn	Indianapolis	1884	1885	M. H. Harding	Lawrenceburg	1853	1854
J. S. Gregg	Fort Wayne	1885	1886	Samuel Reid	Salem	1853	1854
G. W. H. Kemper	Muncie	1886	1887	O. L. Clark	Lafayette	1854	1855
H. Charlton	Seymour	1887	1887	P. S. Shields	New Albany	1854	1855
W. H. Wishard	Indianapolis	1888	1889	J. Pennington	Milton	1854	1855
J. D. Gateh	Lawrenceburg	1889	1890	J. F. Mothershead	Indianapolis	1854	1855
G. C. Smythe	Greencastle	1890	1891	George Sutton	Aurora	1855	1856
Edwin Walker	Evansville	1891	1892	G. B. Walker	Evansville	1855	1856
G. F. Beasley	Lafayette	1893	1894	C. Bowman	New Albany	1855	1856
				D. Meeker	Laporte	1855	1856

<i>Names.</i>	<i>Residence.</i>	<i>Elected.</i>	<i>Severed.</i>	<i>Names.</i>	<i>Residence.</i>	<i>Elected.</i>	<i>Severed.</i>
John Sloan	New Albany	1856	1857	Benj. Newland	Bedford	1878	1879
W. W. Hitt	Vincennes	1856	1857	J. D. Gatch	Lawrenceburg	1879	1880
T. W. Florer	Alamo	1856	1857	John D. Mitchell	Terre Haute	1880	1881
John Moffett	Rushville	1856	1857	F. J. Van Vorhis	Indianapolis	1881	1882
T. J. Cogley	Madison	1857	1858	S. H. Charlton	Seymour	1882	1883
D. Hutchinson	Mooreville	1857	1858	W. H. Schultz	Lebanon	1883	1884
C. West	Hagerstown	1857	1858	J. S. Gregg	Fort Wayne	1884	1885
C. R. Winton	Wabash	1857	1858	W. J. Hurt	Waynetown	1885	1886
T. R. Austin	New Albany	1858	1859	W. V. Wiles	Spencer	1886	1887
Benjamin Newland	Bedford	1858	1858	C. W. Burket	Warsaw	1887	1888
S. W. Fry	Crawfordsville	1858	1859	A. G. Porter	Lebanon	1888	1889
M. M. Latta	Goshen	1858	1859	Silas T. Yount	Lafayette	1889	1890
John Sloan	New Albany	1859	1860	H. D. Wood	Angola	1890	1891
R. M. O'Ferrall	Lafayette	1859	1860	Erwin Wright	Huntington	1891	1892
J. S. McLellan	Jefferson City	1859	1860	C. H. Smith	Lebanon	1892	1893
R. E. Haughton	Richmond	1859	1860	T. F. Lecch	Crawfordsville	1893	1894
J. N. Green	Stilesville	1860	1861	C. S. Bond	Richmond	1894	1895
Charles Fishback	Shelbyville	1860	1861	E. L. Larkins	Terre Haute	1895	1896
L. Humphrey	South Bend	1860	1861	W. F. Batman	Lebanon	1896	1897
Isaac Casselberry	Evansville	1860	1861	Jonas Stewart	Anderson	1897	1898
Calvin West	Hagerstown	1861	1862	Geo. F. Keiper	Lafayette	1898	1899
Henry Cox	Danville	1861	1862	Samuel Kennedy	Shelbyville	1899	1900
A. H. Robbins	Rochester	1861	1862	A. M. Hayden	Evansville	1900	1901
J. A. Skinner	Vincennes	1861	1862	J. B. Berteling	South Bend	1901	1902
W. R. Winton	Wabash	1862	1863	W. H. Gilbert	Evansville	1902	1903
H. G. Sexton	Rushville	1862	1863	Chas. A. White	Danville	1903	1904
A. Preston	Greencastle	1862	1863	I. N. Trent	Muncie	1903	1904
John Moffett	Rushville	1862	1863	M. G. Moore	Vincennes	1903	1904
A. G. Preston	Greencastle	1863	1864	H. J. Hall	Franklin	1904	1905
John Moffett	Rushville	1863	1864	C. T. Hendershot	Cannelton	1904	1905
Benjamin Newland	Bedford	1863	1864	D. J. Loring	Valparaiso	1904	1905
Calvin West	Hagerstown	1863	1864	D. W. Stevenson	Richmond	1905	1906
Wilson Lockhart	Danville	1864	1865	Harry C. Sharp	Jeffersonville	1905	1906
T. B. Harvey	Indianapolis	1865	1866	W. R. Davidson	Evansville	1905	1906
J. H. Woodburn	Indianapolis	1866	1867	J. B. Garber	Dunkirk	1906	1907
R. B. Jessup	Vincennes	1867	1868	C. C. Terry	South Bend	1906	1907
R. N. Todd	Indianapolis	1868	1869	Chas. Chittick	Frankfort	1906	1907
H. P. Ayers	Fort Wayne	1869	1870	W. H. Stemm	North Vernon	1907	1908
I. M. Rosenthal	Fort Wayne	1870	1871	A. F. Knoefel	Linton	1907	1908
J. K. Bigelow	Indianapolis	1871	1872	Geo. R. Green	Muncie	1907	1908
R. E. Haughton	Richmond	1872	1873	E. D. Freeman	Osgood	1908	1909
Wilson Hobbs	Knightstown	1873	1874	Chas. H. McCully	Logansport	1908	1909
W. B. Lyons	Huntington	1874	1875	Chas. Chittick	Frankfort	1908	1909
F. W. Beard	Vincennes	1875	1876	E. M. Van Buskirk	Fort Wayne	1909	
E. D. Laughlin	Orleans	1876	1877	Eugene Hawkins	Greencastle	1909	
N. P. Howard	Greenfield	1877	1878	Theo. Potter	Indianapolis	1909	

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OF THE
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Devoted to the Interests of the Medical Profession of Indiana

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SEPTEMBER 15, 1910

EDITORIALS

OUR PRESIDENT

Dr. Thomas C. Kennedy, president of the Indiana State Medical Association, was born in Shelbyville, Indiana, June 8, 1862. His early education was obtained in Shelbyville, where he graduated from the high school in 1880. His medical degree was obtained from the Kentucky School of Medicine in 1883, and immediately thereafter he began the practice of medicine in his home town, where he remained until his removal to Indianapolis on January 1 of this year. In 1890 he attended clinics in Berlin, London and Edinburgh, and at various times he has taken post-graduate work in Chicago, New York, Philadelphia, Boston and Rochester. At the organization of the State Medical College, at Indianapolis, he was made assistant professor of surgery, and when that college was amalgamated with others to form the medical department of the Indiana University he was made clinical professor of gastro-intestinal surgery. Following his removal to Indianapolis he was made clinician in gastro-intestinal surgery to Bobbs Free Dispensary. He now confines himself largely to general surgery, with special reference to gastro-intestinal surgery.

Aside from membership in his county and state medical organizations Dr. Kennedy holds membership in the American and Mississippi Valley Medical Associations, and he has been secretary of the Association of Big Four R. R. Surgeons since its organization in 1894, with the late Dr. Joseph Marsee as the first president. He has membership in the orders of Odd Fellows, Ben Hur, and Elks, and was district deputy of the Elks for Central Indiana in 1905.

Dr. Kennedy belongs to a family of physicians, his grandfather, father, and four brothers having practiced medicine. He was singularly successful in his home town of Shelbyville, where he conducted a private hospital for ten years and practiced general surgery, and his removal to Indianapolis within the past year was with a view of widening his field for surgical work, which he has taken up as a specialty.

MUNICIPAL CONTROL OF PROSTITUTION IN FORT WAYNE

There has recently passed the common council of Fort Wayne a resolution, introduced by one of the city's ablest medical men, also a councilman, looking toward municipal surveillance of prostitution through the Board of Health.

The resolution itself is broad in its conception, yet brief in its specifications and leaves much of the problem to be worked out in detail by the board. Following is its text:

WHEREAS, It is a well-known fact that venereal diseases are transmissible and are often innocently acquired, and

WHEREAS, The Board of Health is granted power by the statutes to take such measures as it may deem necessary to control the spread of contagious and infectious diseases; therefore, be it

Resolved, By the Common Council of the City of Fort Wayne, that the Board of Health of said city be and the same is hereby instructed to adopt such rules and regulations as may be needed to control, so far as may be possible, the spread of the so-called venereal diseases by the inmates of the said houses of prostitution.

(Signed) B. VAN SWERINGEN.

While technically it might be urged that by the resolution it is not made obligatory on the health board to direct its attention also to that important class known as clandestine prostitution, yet the board's powers are sufficiently broadly defined by the statute to permit of that form being included in the proposed surveillance. Of just what the efforts of the health authorities are to consist has not as yet been indicated other than the attempt to place these diseases on the same plane of isolation and quarantine as any other contagion, and a sum of five hundred dollars is prayed to defray the expenses of the project.

Naturally the movement is arousing the antagonism of the so-called religious and social puritans, and thus has arisen the same stumbling block to venereal control that has ever characterized the history of this measure from its inception, viz.: the blind opposition of religion and society. The public press, teeming with its rotten advertisements of charlatan treatment for "male and female weakness," "lost manhood restored," etc., presumes to attack a measure so well proven scientifically as one of the well-recognized means for the conquest of the "black plague," and arrays itself on the side of those who would, ostrich-like, bury their heads in the sand and deny the existence of the evil, for fear of affording it some official recognition.

From time immemorial efforts have been made actually to drive out the pest by threats and laws

only to find that inevitably has there resulted merely a dispersion from the known centers and a resulting increase in the clandestine form. That the evil not only does exist, but that it is increasing to an alarming extent, cannot be denied by anyone who has taken the pains to look the matter up. And the very reason that the pest is gaining headway is because of this blind opposition by the public toward measures of restriction as well as the *laissez-faire* attitude of a medical profession that hasn't the courage to assert itself in the fight. The very complete data on municipal regulation in the city of Paris, where the most elaborate and more nearly perfect system has been in force for a number of years, leave no room for doubt in the really scientific mind as to what can be accomplished in this way. But similar measures inaugurated in this country in the state of Missouri met with such an overwhelming storm of protest, mostly from club women and the clergy, that the meager support offered by the medical profession was drowned and the statute swept away after an existence of but one year.

It seems strange indeed that a frenzied public seems totally unable, or else unwilling, to comprehend the attitude of the profession in this matter. Can the people not see that here, as in all other preventive medicine, the motives actuating our contentions are purely unselfish, for the abolition of venereal diseases means the withdrawal from our patronage—and this is particularly true of the younger members of the profession—of thousands of patients? Can they not see that the moral aspect of the vice is just as appalling to us as to them, nay even infinitely more so, because we are forced to see its results daily in all its horrors? And can they not appreciate that our stand is not at all one of approval of the crime, but rather merely one of broad and practical tolerance of an existing evil that is so deeply rooted as to demand sanitary regulation of the most vigorous sort?

A saner public would study the matter in all its aspects and would then realize that by putting its shoulder to the wheel of public education, by teaching to children the physiology and hygiene of sex, by bending every effort toward the abolition of the so-called "double standard of morality" whereby in man it winks at what in woman it relentlessly and unforgivingly scorns, and by trusting an honest profession to handle the sanitary side of the question, that by such actions, be it repeated, the public might realize and rest content that it was exercising its sanest and most effectual powers, in both a moral and scientific way, toward the conquest of this dark scourge.

Likewise let it absolve the profession from an oath that must ever keep these diseases under cover of darkness until innocent women and children are made to suffer lasting invalidism or imbecility because a cowardly physician hiding under his Hippocratic oath hasn't the moral stamina to protest against the marriage of a licentious and diseased patient to a pure and innocent girl, nor has he the legal right (it should be made his legal duty) to report a venereal contagion, though in our state he is rightly made to report his tuberculous and typhoid patients in order that the source of infection may be traced and the public protected.

So much is to be said on this subject that we wish it could be indefinitely continued. Suffice it to say that Fort Wayne is to be congratulated on its progressiveness and we hope that ere long its prostitutes will be at least made relatively clean, and that it be without any certificates of cleanliness either, for with such regulation by the health board, the public can have no quarrel.

THE UNRELIABILITY OF THE "CAMMIDGE REACTION"

The robe of conservatism that so proudly encircles the form of true scientific medicine has so frequently been tugged at and yet ultimately emerged unseathed that it no longer amazes the rank and file to see a seemingly well-authenticated medical truth, flourish though it may for a time, ultimately succumb to the battering ram of research and fall by the wayside.

Such is the apparent fate of what we had but a moment ago hoped would prove a reliable diagnostic test of certain pancreatic lesions, viz.: the so-called "Cambridge reaction." For some months past evidence has been accumulating to indicate that the reliability of the test was open to serious question. But now, thanks to the masterful hand of Louis B. Wilson, sufficient proof has evolved to establish the fallacy of the test. Under the caption "Clinical Experiences with the Cambridge Reaction" Wilson¹ thus summarizes the work carried on in the laboratory and clinic at St. Mary's Hospital at Rochester, Minn.:

"1. That even where the most elaborate care is exercised to follow the technic of Mr. Cambridge's 'C' reaction, in the most uniform manner, *if knowledge of the clinical histories and other factors of the personal equation be eliminated*, the end results, judged by Mr. Cambridge's own

1. Surg. Gyn. and Obstet., Aug., 1910.

criteria, must be considered, as a means of diagnosing disease of the pancreas, as both valueless and misleading.

"2. There is no apparent clinical relationship between disease of the pancreas and any of our various types of end reaction.

"3. It does not seem to us that the end reactions are artefacts but rather that they indicate actual metabolic variations. The relationship of these changes in metabolism to the welfare of the patient is not apparent."

In this work the results of 504 tests were analyzed, with every effort to rule out errors by personal bias, lack of proper controls, or the slightest neglect in following the elaborate technic of Cammidge to the minutest detail. The cases were divided into four distinct groups as follows: Group 1—Patients with pancreas involved; Group 2—Patients with pancreas not involved; Group 3—Sick persons whose pancreases were not examined but who exhibited no recognizable symptoms of pancreatitis, and Group 4—Apparently well persons (members of the hospital staff). Of twenty-six patients who were shown to have pancreatitis (Group 1) only nine, 35 per cent., gave a positive reaction, and, even of these, seven in one or more of a series of three tests gave negative results. Of seventy-four sick persons without pancreatitis (Group 2), thirty-five, 47 per cent., gave one or more positive reactions. Of 207 sick persons who in all probability had no pancreatitis (Group 3), seventy-three, 35 per cent., were positive. Of seventeen well persons (Group 4), five, 30 per cent., were positive.

When from these figures it is shown that in a group of cases in which at operation the pancreas is actually seen to be diseased the percentage of positive reactions is only 35 per cent., and in another group of individuals apparently healthy the percentage of positive reactions is 30, while in still another group in which at operation the pancreas was seen not to be involved and yet 47 per cent. give positive Cammidge reactions, there seems little doubt as to the fallacy of the test.

Thus again is it demonstrated that the part of wisdom in medical science must ever be a stand for ultra-conservatism. In no calling is there less right to jump at conclusions and to chase rainbows than in ours. He is the true scientist who will announce no discovery, who will lay claim to no newly established fact, until every link in the chain of evidence in support of his theory is so securely welded as to stand the blast of the experimental furnace without so much as even changing form.

SHOULD THE DUES BE RAISED?

The only state medical society of any size and importance which has dues as low as one dollar per year is the Indiana State Medical Association. What has been accomplished by the Association with funds secured from such a low assessment is a record to be proud of, but the organization is like a child that requires more expense to maintain as it grows older and larger, to say nothing of added expense due to changes in economical conditions. There was a time, when the organization was small and showed little progressiveness, when one dollar dues was sufficient to meet all expenses; but it is a question for consideration if at the present time the dues should not be raised for the purpose of meeting demands which come with increased size and a broadened field of usefulness.

When the Association was reorganized in 1903 the principal expenses were included in the cost of the bound transactions, amounting to from 75 to 80 cents per member, the cost of miscellaneous printing, amounting to \$50 or \$60 per year, and the honorarium to the secretary, amounting to \$100 per year. Then the local expenses at the place of meeting were met out of the income derived from exhibitors, and frequently after the annual session the committee on arrangements had a surplus to turn into the Association treasury.

But since then conditions have changed. The printed proceedings of the Association now cost no more than formerly; in fact, bound transactions of the annual proceedings of the Association, at the present greatly increased cost of printing, could not now be furnished to members of the Association even if the whole amount of dues was appropriated for the purpose. In other words, *THE JOURNAL*, which costs but 75 cents per member and prints all the proceedings of the Association, is a distinct economical saving to the Association aside from the fact that it gives the members much more reading in the shape of additional scientific articles, news notes, death notices, editorials, society reports and book notices, to say nothing of serving the Association and saving expense in printing and postage by publishing Association announcements, programs, etc. This present "Fort Wayne Number" is an example of how *THE JOURNAL* serves the Association efficiently in announcements and other information concerning the annual session, and in a far better and cheaper way than otherwise possible.

But while the publishing expenses of the Association are no more than formerly, and are even much less than they would be under the old way, the other expenses of the Association have increased. The secretary's honorarium has been increased to \$300, and the Association, at some expense, has undertaken some commendable efforts to increase its size and usefulness by having councilors assist in organization efforts. The councilors, at a sacrifice of time and money, have accomplished much in the work of increasing the size and influence of county societies, and in turn increasing the size and usefulness of the State Association. For their efforts they are paid from the Association treasury actual expenses only. This is only right and the practice should continue. But during the past year or two, owing to limited funds in the Association treasury, most of the councilors have paid a part of the actual councilor expenses from their own pockets. To have charged the whole expense to the Association would have meant that the treasury would be depleted and the Association would be in debt.

There was a time when but one stenographer was employed to take the proceedings of the Association, and if he did not get all the proceedings the discrepancy was overlooked. The discussions were not long and the expense not great. Now we usually require two stenographers, and owing to the length of our programs and the liberal discussion the proceedings cost much more in stenographers' fees.

Then there is the matter of local expenses of the Association at the place of meeting. At the present time, with the lessened tendency for firms to exhibit at state meetings, the income from commercial exhibits has been materially lessened. In consequence some of the local expenses either have to be met out of the Association treasury, or the local physicians where the annual session is held have to foot the bill. In reality it is an injustice to ask the local physicians to pay the Association's expenses, as they do all that they should do when they do the work and pay heavy entertainment expenses.

Again, there is the increased cost of printing stationery for the officers and councilors, and other incidental expenses associated with the running of an organization which has doubled its numbers in the last ten years and now really gives its members something and ought to give its members more if it keeps in line with the progressiveness of other state medical societies.

The Constitution says that the secretary shall keep a card-index register of all the legal practitioners of the state by counties, noting on each

physician's card his status in relation to his county society. The secretary ought to have such an index, as it would be invaluable in assisting in organization work, but he has not kept such a list, and all because the funds of the Association would not permit the attending expense.

The councilors should visit county medical societies in their several districts at least twice per year, and the actual traveling expenses of such visits should not come out of the councilors' pockets.

The Association should have funds to hire competent stenographers to take the proceedings at annual sessions, and also to pay the Association's share of local expenses. It should also have at least a limited amount of money to be used in progressive features which from time to time present themselves and which at present are impossible of adoption through lack of funds.

In short, the Indiana State Medical Association, in order to be live and progressive, should have more funds than it has at present. It cannot get "something for nothing," and the prospects of the future are gloomy with a depleted treasury. The Treasurer's report, published in this number of *THE JOURNAL*, shows a balance of \$305.97 and except for a few printing bills none of the Association's expenses for 1910 have been paid. It is evident that at the close of the Fort Wayne session the Association will be in debt fully \$350 to \$400. This amount must be carried over to another year and then the Association will be in no better financial condition to pay the deficiency unless the dues are raised, for the expenses of next year will be as large as this year and the present income of the Association is not sufficient to meet the demand.

No doctor who appreciates what the State Association is doing for him should object to the payment of two dollars per year as dues, and we fully believe that the time has arrived when such an advance should be made in the interest of the continued and increased value to the medical profession which the present Association represents. It is absolutely impossible to run any large, progressive medical society on one dollar dues, and judging from the fact that the Association is now facing a deficiency, and that it was absolutely necessary for the Association to shirk considerable responsibility this year on account of lack of funds it would seem that the question of going forward or backward depends on the recognition of the fact that it takes something more than sentiment to keep up a medical society. If we are to continue longer with one dollar dues then

the members must expect to see the growth and interest in the Association checked and the field of usefulness limited, all of which would be exceedingly regrettable.

MEDICAL JOURNALS SHOULD BE PUBLISHED IN THE INTEREST OF THE MEDICAL PROFESSION

At the present time there are published in this country about four times as many medical journals as can be supported by the medical profession. It is a well known fact that the circulation of many journals is not bona fide, except to a very limited extent, and the real financial support comes from advertising. This leads to the inevitable result—journals virtually owned and controlled by the advertisers. The more thrifty and more conscienceless the publisher the more advertising he secures, because he takes anything, no matter how objectionable it may be to the medical profession. In consequence some of the large so-called independent journals are loaded with the rankest kind of proprietary medicine advertising, their reading pages reek with commendatory articles concerning the virtues of the various nostrums advertised, and their editorial pages are loud in support of proprietary interests and equally loud in protest against anything which tends to regulate or limit the traffic in nostrums. The doctor who subscribes for or permits such publications to come to him is lending support to the life of journals which have no legitimate right to exist.

It is time for the medical profession to shake off lethargy and get busy in the work of putting out of business these journal vultures which prey upon medical men and hinder medical progress. Doctors should appreciate the fact that they can not get "something for nothing." They should be willing to pay for their medical reading and then demand the right kind of reading. We need and should have a number of high class journals that will print only the best of medical literature, scientific and practical, and be under the control of the medical profession instead of the advertisers. Medical men have a right to demand that their medical journals shall not offend the sensibilities of self-respecting doctors by flaunting in their faces a lot of nostrum advertising and editorial approval of the iniquitous practices of nostrum venders. Medical men should support journals published in their interest instead of in the interest of advertisers, and we will go a step

farther by saying that the medical profession ought to support medical journals containing no advertising of any kind whatsoever. Such a journal would indeed be independent. Those journals which now style themselves independent are not independent to the slightest extent, but are bound hand and foot to their chief supporters, the advertiser—generally the nostrum manufacturer. Not one of the so-called independent journals has dared say one word in favor of the propaganda of reform in proprietary medicine manufacture, and nearly all have criticized and condemned the Council on Pharmacy and Chemistry of the American Medical Association, and villified and abused those who have been prominent in the work, and all because the nostrum manufacturers, the real supporters of the independent (?) journals, have demanded it. The independent journals have been supers to the proprietary medicine interests and the medical profession has looked on with indifference. This condition of affairs will continue unless medical men take a decisive stand for a change. Refusal to subscribe for or even receive gratuitously the journals carrying nostrum advertising will soon kill them off or result in such a change of policy that ethical physicians can countenance them. But it should be remembered that the income from nostrum advertising pays publication expenses, and if the medical profession is going to demand that the income be cut off then the medical profession should be willing to make up the deficiency by increased subscription rates.

A TEXT-BOOK OF PATHOLOGY. By Joseph McFarland, M.D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College of Philadelphia. Second Edition. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$5 net; half morocco, \$6.50 net.

In so far as six years have elapsed since the first edition of this work on pathology appeared, the author has felt the necessity for making a thorough revision of the text and of including such advances as have a genuine character about them.

Being a work written essentially for students working for the degree of Doctor of Medicine, the well-known facts in the principles of pathology are presented as such, while others are briefly mentioned as mooted or as yet not understood.

The arrangement of subjects follows the general plan of the better texts on pathology, each section being systematically subdivided, the more important subject-matter being given in larger type, while additional information or subjects of lesser importance are found in small type.

The methods of composition is a most convenient one. This, with the comprehensive exposition of subjects, makes the volume, as its former reputation has been, an admirable text-book.

EDITORIAL NOTES

ALL county society officers should be in Fort Wayne Wednesday afternoon, September 28.

THE PLACE—Fort Wayne.

THE TIME—September 29 and 30.

THE OBJECT—The annual session of the Indiana State Medical Association.

Do NOT forget your membership card when starting for the Fort Wayne session. Registration will be by card according to provision of the by-laws of the Association.

No DOCTOR will have cause to regret going to Fort Wayne to attend the annual session of the State Association. The social and scientific programs are a sufficient guarantee of a profitable visit.

MEDICAL inspection of schools has secured a strong foothold in Indiana and it is thought that within a very few years every public school in the state will have its medical inspector. This should be followed with the establishment of open air schools for tuberculous children.

MEMBERS of the House of Delegates of the State Association should remember that they must have credentials, and such credentials should be in the hands of the chairman of the Credentials Committee, Dr. C. P. Cook, New Albany, Indiana, at least ten days before the Fort Wayne session.

It is hoped that the Fort Wayne session of the Indiana State Medical Association will be a record breaker. The time of year is most favorable, the place of meeting is a railroad and trolley car center easy to reach, the program is inviting, and the Fort Wayne profession offers a cordial welcome and abundant hospitality.

THE House of Delegates of the State Association, Fort Wayne session, will meet in the ball room on the second floor of the Anthony Hotel, Fort Wayne, at 8 p. m., Wednesday, September 28. A full attendance is desired. The meeting will adjourn in due time for the smoker to be given in the main dining room of the Anthony Hotel later in the evening.

THOSE who attend the Fort Wayne session of the Indiana State Medical Association are promised a rare treat in the address of Professor Barton Cooke Hirst on the subject, "The Probable Direction of Progress in Gynecology in the Immediate Future." Professor Hirst is well known through his position in the University of Pennsylvania as professor of obstetrics, and his numerous contributions to medical literature, chief among which is his text-book on obstetrics.

EVERY president and every secretary of a county medical society in Indiana should attend the meeting of county medical society officers, to be held at Fort Wayne, Wednesday, September 28, in connection with the annual session of the state association. The meeting will be called at 3:30 p. m., at the Anthony Hotel (Association headquarters), and an excellent program has been prepared. Every county society officer will be better able to serve his society after he has listened to the practical talks which are on the program for the county society officers' meeting.

THE Association's Committee on Inebriety has very wisely recommended that the physicians of Indiana urge the enactment of a law providing for the erection and maintenance of a state hospital for the control and treatment of inebriates and drug habitues, and that a committee be appointed by the Indiana State Medical Association for the purpose of bringing the subject before the next legislature and aiding in every possible manner the securing of the desired result. Such a committee should have the coöperation and support of the Committee on Public Policy and Legislation.

THE Committee on Public Policy and Legislation of the Association has made no recommendations this year. It occurs to us that some recommendations could have been made in relation to the present agitation concerning vivisection, the national department of health, and the enforcement of our pure food laws. These subjects are certainly worthy of the earnest consideration of the medical profession, and the Committee on Public Policy and Legislation could have made some suggestions, which, aside from representing the opinions of the medical profession, would be of some service as a basis for the action of the succeeding committee.

A LONG list of doped infant remedies has been issued by the United States Bureau of Chemistry.

A bottle with such a reassuring name as "Kopp's Baby's Friend" is found to contain morphin sulphate, and "Hooper's Anodyne, the Infant's Friend," contains morphin hydrochlorid. Other ingredients discovered in various "soothers" are chloroform, codein, heroin and cannabis indica, and larkspur. Dr. L. F. Kebler, author of the report, says: "Lest any suspicion be aroused in the mother, the manufacturer makes statements of the following character: 'Contains nothing injurious to the youngest babe.'"—*Collier's Weekly*, August 27, 1910.

WE especially desire to call attention to the demonstration which will be given by the Committee on Pathology at the coming session of the Indiana State Medical Association. The demonstrations will be four and possibly five in number and are as follows:

1. Negri bodies and the anatomical diagnosis of rabies from the brain.
2. Demonstration of spirocheta pallida.
3. Blood vessel surgery. Exhibition of animals on which anastomosis of vessels has been performed, etc.
4. The demonstration of Wassermann reaction.
5. Autopsy.

These demonstrations will be in connection with illustrations, specimens, materials, etc., and will be fully explained, and of interest to every physician who attends the Fort Wayne session. The demonstrations will occur one-half hour before each general scientific meeting.

WITH few exceptions medical men are selfish, jealous of each other's successes and unappreciative of things that are done for them. This seems like a cruel indictment, and yet instances without number could be cited to prove the statement. Men may use their brains, energy and money to assist in building up the medical profession and aiding in medical progress, yet it is only occasionally that such men are sufficiently honored and remembered for what has been done. The particular instance which calls forth this lament is the failure on the part of the medical profession of the United States to properly commemorate the life and work of N. S. Davis, the great founder of the American Medical Association, and one of the foremost physicians and teachers of his time.

For several years a committee of the American Medical Association has been endeavoring to collect from the members of the medical profession of the United States a memorial fund of \$25,000 to commemorate the work of Dr. Davis

as a medical practitioner, teacher and leader in his profession. But the task, simple as it ought to be, has resulted in practical failure, a total of less than \$3,000 having been collected. The report of the treasurer of the Davis Memorial Fund shows that only six states have made contribution to the fund, and most of the donations are liberal contributions from a few individuals.

The chairman of the committee, in offering his resignation, said that it was the first time he had ever appeared before a representative body of his profession with a sad heart. He says that he had every right to expect the State of Illinois, and especially the City of Chicago, the home of the Association and the almost lifelong center of Dr. Davis' public activities, would furnish much more than its quota in commemoration of in many respects its first citizen. Many have felt that his public services to his city and state warranted the independent action of its citizens in commemorating him in imperishable bronze looking out on the lake, the waters of which, largely through his foresight and energy, have been given in ample and permanent supply to the thirsty city. It was supposed easy to raise \$15,000 in Chicago alone for this purpose. The report of the treasurer shows that, beside his own generous gift, that of Dr. Quinn and the small donation from the Davis Memorial Service Fund, almost nothing has been done where most was expected.

The chairman further says that he confesses to a great disappointment, and for the reason that no man could present a more worthy object, not so much for the solicitation of funds as the request for the privilege extended to a great profession of making the public recognition of its really great and worthy founder. The chairman concludes his report by saying that subscribers to the *Journal of the American Medical Association*, numbering over 50,000, and the great army of the profession, which is in excess of 100,000 in the United States, all know that this neglect to properly commemorate the work of Dr. N. S. Davis is little less than a disgrace.

Those of our readers who will take the trouble to read the report of the treasurer of the Davis Memorial Fund will note that Indiana is not represented in the contributions, and while the medical profession of the great State of Illinois, and more particularly of the City of Chicago, are deserving of the severest censure for their apathy in the matter of subscribing to the fund, there is not the slightest reason why the medical profession of other states, Indiana included, should not be held in disgrace for the apathy displayed in this movement to honor the name of one who did so much for the medical profession of America.

ILLINOIS physicians have every reason to feel disgraced over the report of the Carnegie Foundation concerning medical education in Illinois and the enforcement of the medical practice laws by the Illinois State Board of Health. Even Louisville, for many years known as the medical diploma mill of the country, does not come in for such a scoring as the following, taken from the report:

"The City of Chicago is, in respect to medical education, the plague spot of the country. The state law is fairly adequate, for it empowers the board of health to establish a standard of preliminary education, laboratory equipment and clinical facilities, thus fixing the conditions which shall entitle a school to be considered reputable. In pursuance of these powers the board has made the four-year high school or its equivalent the basis and has enumerated the essentials of the medical course, including, among other things, clinical instruction through two annual terms.

"With the indubitable connivance of the state board these provisions are and have long been flagrantly violated. Of the fourteen undergraduate medical schools above described the majority exist and prepare candidates for the Illinois state board examinations in unmistakable contravention of the law and the state board rules. These schools are as follows: (1) Chicago College of Medicine and Surgery (Valparaiso University), (2) Hahnemann Medical College, (3) Hering Medical College, (4) Illinois Medical College, (5) Bennett Medical College, (6) Physio-Medical College of Medicine and Surgery, (7) Jenner Medical College, (8) National Medical University, (9) Reliance Medical College, (10) Littlejohn College of Osteopathy. Of these only one, the National Medical University, has been deprived of "good standing" by the state board. Without exception a large proportion of their attendance offers for admission an "equivalent," which is not an equivalent in any sense whatsoever; it is, nevertheless, accepted without question by the state board, though the statute explicitly states that it can exact an equivalent by "satisfactory" examination. In the case of the night schools, for instance, one or two years' requirements are satisfied by "coaching" one night a week in each of the several subjects; one evening is devoted to Latin, the next to English, the next to mathematics. There is absolutely no guarantee that the candidate accepted on the equivalent basis has had an education even remotely resembling the high school training which the Illinois law intends as the minimum upon which it will recognize a candidate for the physician's license. If the state board should—as in

duty bound—publicly brand these schools as "not in good standing," by reason of their failure to require a suitable preliminary education of their students, their graduates would be immediately excluded from practice in Illinois; adjoining states would rapidly follow suit, with the result that the schools would shortly be exterminated. Fortunately the case against them does not rest alone on the question of entrance requirements, for not a single one of the schools mentioned furnishes clinical opportunities in proper abundance, and some of them even fail to provide the stipulated training in other branches, e. g., anatomy. An efficient and intelligent administration of the law would thus reduce in short order the medical schools of Chicago to three, Rush, Northwestern and the College of Physicians and Surgeons."

The report further says that the College of Physicians and Surgeons and the medical department of Northwestern University should greatly strengthen their laboratory instructions, and these two colleges, together with Rush, should strengthen their clinical instruction.

The question now arises, Will the diploma mills of Chicago be closed up or raise their standard so that they can be classed as at least creditable, and will the Illinois State Board of Health, which has been criminally lax in the matter of the enforcement of the medical practice act, assist in the cleaning-up process?

DEATHS

DR. JAMES C. TAYLOR, of Richmond, died at the Franklin, Ohio, sanatorium August 26. He was a native of Ohio and a veteran of the Civil War, having served with an unusually brilliant record.

DR. THOMAS CAMMACK, of Milford, the oldest practicing physician in the state, died at his home July 9. He had practiced for more than half a century in Milford. Dr. Cammack was born at Georgetown, D. C., March 4, 1822. He graduated from the George Washington University in 1845. He practiced in Ann Arbor, Mich., Valparaiso, Warsaw, Leesburg, and Milford, coming to the latter place in 1851, residing there until his death.

DR. HIRAM BURTON died at his home near Somerville, August 17, after a lingering illness with Bright's disease. Dr. Burton was born at Winchester, Va., April 22, 1832, coming with

his brothers to Xenia, Ohio, while still quite young. Later he came to Indiana, where he resided until his death. He was engaged in the practice of medicine until three or four years ago, when he was obliged to give up active work on account of failing health.

DR. WILLIAM WANDS, of Indianapolis, died August 25. Dr. Wands was born in 1836 and settled in Indianapolis in 1848. During the Civil War he was an assistant surgeon. After the war he again settled in Indianapolis and was a partner of Dr. John A. Sutcliffe for thirty years. Dr. Wands was a witness in the celebrated Clem murder trial, having heard the shots fired. During most of his professional career he wore the broadcloth frock coat, white tie and silk hat of the "old school."

NEWS, NOTES AND COMMENTS

DR. JOSEPH H. WEINSTEIN, of Terre Haute, has recently returned from a European trip.

DR. EARLE GREEN, of Muncie, has been commissioned a captain in the Medical Corps, Indiana National Guard.

THE first meeting of the International Medical Association for the Prevention of War will be held in Paris in 1911.

THE next meeting of the Eleventh Councilor District Medical Society will be held in Peru, Ind., October 20, 1910.

DR. A. S. DICKY, of Tipton, was elected president of the Ninth Councilor District Medical Society at the last meeting.

DR. J. RILUS EASTMAN, of Indianapolis, has recently returned from a month's vacation at Ocean Grove, New Jersey.

THE annual recreation meeting of the Laporte County Medical Society was held at Pine Lake Inn, Thursday, August 11, 1910.

DR. LILLIAN MUELLER, the house physician of the Women's Hospital, Detroit, has returned to Indianapolis to practice medicine.

DR. KENT K. WHEELLOCK, Fort Wayne, is in Europe. He will devote two or three months to sight seeing and post graduate work.

THE second annual meeting of the American Association of Clinical Research will be held in Boston on September 28 and 29, 1910.

DR. P. B. CARTER, of Macy, while attempting to untangle some telephone wires in front of his home recently, fell and broke his arm.

DR. F. A. TUCKER, of Noblesville, returned August 20 from Harvard Medical College, where he has been doing post-graduate work in diseases of the chest.

DR. F. M. SROOK, Medical Corps, United States Navy, has been detailed to conduct lecture and laboratory courses at the New York Post-Graduate Medical School during the months of August and September.

FOUNDER'S DAY was commemorated at Dr. W. B. Fletcher's Sanatorium, Indianapolis, August 18, 1910, in honor of the life and work of Dr. William Baldwin Fletcher, born August 18, 1837, who died April 25, 1907.

BLOOMINGTON, Newcastle and other cities in Indiana have had typhoid epidemics recently. In nearly every water analysis made by the state laboratory it was found that the infection was due to vaults in the immediate neighborhood of the wells.

DR. GEO. B. LAKE, of Wolcottville, Ind., received an appointment on July 7 as first lieutenant in the medical reserve corps of the United States Army, and left early in September for Washington, where he will enter the army medical school for an eight months' course, after which he will be subject to orders.

DR. H. W. WILEY, the United States Chemist and Pure Food Advocate, is coming to Indiana in September and October to deliver addresses at

Lafayette, Terre Haute, Richmond, Madison and Indianapolis. The subject of his addresses will be the physiologic and hygienic phase of the pure food agitation.

THE first public comfort station to be erected in Indiana was recently dedicated by Ex-Mayor Chas. A. Bookwalter, of Indianapolis. It is situated at the corner of Illinois and Washington streets, Indianapolis, and cost \$20,000. The station is underground, only the roof and tower being visible, the foul air being ejected through the latter.

THE excavation for the large addition to the Methodist Hospital, Indianapolis, was started September 10 and will be completed in April, 1911. It will be four stories in height with basement, and will add seventy-two beds to the institution. There will be a sun parlor on each floor, and also a roof garden. A children's ward will occupy one end of the building. Ex-Vice-President Chas. W. Fairbanks was recently elected chairman of the board of directors.

A TYPICAL sanitary camp is to be established at Fort Benjamin Harrison. Col. L. M. Maus, assistant surgeon general, United States Army, will be in charge. War has been declared against the house fly and every known means will be used to exterminate it. All food supplies are to be screened and covered until eaten; all garbage is to be burned at once or placed in fly-tight containers, and even the latrines will be made fly-proof. By this means it is hoped that typhoid will be eliminated from this maneuver camp, which will be composed of 15,000 soldiers of the regular army as well as the militia of Indiana, Illinois, Wisconsin, Ohio and Kentucky.

SINCE the publication of the August number of THE JOURNAL the following physicians have been reinstated as members of the Indiana State Medical Association:

DUBOIS CO.	PORTER CO.
BIRDS EYE.	KOUTS.
Albertus Jeffers.	P. D. Noland.
MARTIN CO.	SULLIVAN CO.
SHOALS.	SULLIVAN.
E. E. Long.	F. C. McBride.
MARION CO.	TIPPECANOE CO.
INDIANAPOLIS.	LAFAYETTE.
S. M. Tilson.	Ernest S. Baker.
C. E. Stephenson.	WASHINGTON CO.
G. W. Combs.	SALEM.
	A. A. Reed.

THE annual meeting of the Board of State Charities was held in Marion, September 10 to 13. The following program was carried out: Saturday evening, September 10, address by S. E. Smith, president of the conference, and an address of welcome by the mayor; reception to delegates. Sunday, addresses by Governor Marshall and by Jane Addams, of Hull House, Chicago. Monday morning, round tables; afternoon, meeting of committee on county and township charities, W. H. Eichhorn, of Bluffton, presiding. Papers were presented by Mrs. Caroline Bartlett Crane, of Kalamazoo, Mich., and Dr. Miles F. Porter, of Fort Wayne. The evening session was devoted to a general discussion of state charities, with an illustrated lecture by Miss Mary T. Wilson, Indianapolis. Tuesday, round tables all the forenoon. Visits were made to local institutions in the afternoon, and at the evening session addresses were presented by Mrs. Albion Fellows Bacon, of Evansville, and Ernest P. Bicknell, national director of the American Red Cross Society.

SOCIETY PROCEEDINGS

HUNTINGTON COUNTY

The Huntington County Medical Society entertained the members of the Wells County Society August 16. Dr. S. A. Shoemaker, of Poneto, read an interesting paper on Ocular Defects and Their Causal Relation to Reflex Neuroses. Dr. Shoemaker brought out the fact that many nervous symptoms as well as gastric neuroses were relieved by the proper fitting of glasses. He also stated that migraine in very many cases is relieved by relieving the eye-strain.

The paper was discussed by Drs. C. H. Good, G. E. Fulton and Maurice H. Krebs.

Dr. E. W. Poinier, of Andrews, read a paper on Placenta Prævia, with report of a case. Dr. Poinier called attention to the disadvantages of the country practitioner when he meets a case of placenta prævia. He must meet the conditions in a far different way than the man in the city who has the surgeon at his elbow as well as every hospital facility. Discussed by Drs. J. W. McKinney, Ervin Wright, W. C. Chafee and C. L. Wright.

The scientific session was followed by an old-fashioned chicken dinner. Dr. Ira E. Perry, of Bippus, welcomed the Wells County members, and Dr. J. W. McKinney, of Bluffton, responded in behalf of Wells County.

Adjourned.

R. Q. TAVINER, Secretary.

MONTGOMERY COUNTY

The Montgomery County Medical Society held an enthusiastic meeting at the Elks' Home, Crawfordsville, July 19. Two excellent papers were read and

discussed. Dr. Bonnell's paper on Placenta Prævia created a great deal of interest. He recommended immediate action in all cases of central implantation as soon as diagnosis is made, and temporizing treatment admissible in lateral implantations only when patient is within easy reach of her physician.

Dr. Barcus read a paper on multiple fracture of the patella and reported a case. The doctor recommends the immediate suturing and the open method unless specially contraindicated by patient's condition. Special attention given to cleaning the joint of clots without irrigation, freeing the broken edges of periosteum or other intervening substances and perfect adaptation of bone with silver or aluminum wire, and accurate adaptation of periosteum with catgut. Immobilize the joint, but use passive motion as indications will allow. This paper was recommended to the program committee of the State Association as being worthy of a place on the program at the September session.

Adjourned.

J. L. BEATTY, Secretary.

PERRY COUNTY

The Perry County Medical Society met at Tell City, August 25. After transacting its routine business and enrolling two new members, Drs. Dillis Connor and Walter Cluthe, it adjourned until afternoon.

On reconvening, Dr. W. R. Davidson, counselor of the First District of Indiana, gave a talk on the advantages of organization; also speaking of the growth in membership in medical societies in the state, of the importance of physicians attending regularly the meetings of local medical societies, and the interest that physicians are taking in sanitary matters for the public good. He also stated that every vocation is now becoming well organized, and through organization gaining what single-handed could not be accomplished, and that therefore medical men ought also to belong to a strong and well conducted association.

Dr. A. M. Hayden, of the Crescent Sanitarium, Evansville, read a paper on "Appendicitis." Dr. A. J. Knapp, of Evansville, gave an informal talk.

Dr. William Cluthe, Secretary of the City Board of Health, said he asked the question at the last session of the Health Officers' meeting at Indianapolis, with reference to tubercle bacilli in the sputum, as to the number required to diagnose tuberculosis. Up to date no answer received. In sending specimen in for examination, the report came back *Negative*, "a few bacilli present." The question is, how many bacilli are required to make a positive diagnosis.

Several physicians spoke of the requests from the State Board of Health with reference to more definite death causes. The subject of membership in the American Medical Association without being a subscriber to THE JOURNAL was also spoken of.

The society voted that the present Secretary of the State Association be retained in office as long as he desired the position. The society also placed itself on record as favoring the separate offices of Secretary and Editor of THE JOURNAL.

Adjourned.

CHAS. M. BRUCKER, Secretary.

PORTER COUNTY

The Porter County Medical Society met in regular session June 7 with President Take in the chair. A case with cardiac lesion following scarlatina was presented. After being examined by different members of the society, three months' rest in bed was advised.

Dr. Dobbins, of Wheeler, read a paper on "Acute Ileocolitis in Children." Discussion. Dr. Take, of Valparaiso, read a paper on "Chronic Gastritis," in which he advised more laboratory work and more accurate diagnosis by the general practitioner.

The Flexner report on medical colleges was sharply criticized by several members.

Adjourned.

G. R. DOUGLAS, Secretary.

Meeting of July 5

Porter County Medical Society met in regular session with Vice-President Nesbitt in the chair. The time of meeting of the society was changed from the first Tuesday of the month, 2 p. m., to the first Monday, 8 p. m., in the hope that attendance would increase, as it would not conflict with office hours.

Dr. F. M. Mitchell, of Valparaiso, read a paper on "Corneal Ulcer," which was of value to the general practitioner. Dr. J. A. Ryan, of Valparaiso, read a paper on "Enuresis in Children." Discussion.

Adjourned.

G. R. DOUGLAS, Secretary.

Meeting of August 2

Porter County Medical Society met in regular session with President Take in the chair. After preliminary business, Dr. H. M. Evans, of Valparaiso, read a paper entitled "Pellagra." No one present had seen a case, but the paper was timely, inasmuch as cases may appear anywhere without being heralded. The discussion brought out the fact that each one feared he might have the problem to face at some time. The etiology and treatment were discussed and the various theories were given attention.

Adjourned.

G. R. DOUGLAS, Secretary.

SPENCER COUNTY

The regular meeting of the Spencer County Medical Society was held August 23, at the office of Dr. McClary, Dale. Minutes of last meeting read and approved. The applications of Drs. Bean, Bradley and Maslowsky were received and placed with the board of censors. The paper of Dr. H. Q. Weiss on Ophthalmia was selected to be read at the district meeting to be held at Evansville in November. A number of cases were presented. Visitors present, Drs. W. S. Bryant, Dale; A. M. Bean, Chrisney; L. B. Knebler, J. P. Salb, and E. A. Sturm, of Jasper, and H. C. Knapp, Huntington.

Dr. McClary read a paper on "Tuberculosis," which was prepared for the I. O. O. F. sanatorium commission. Discussion. Dr. N. A. James read a paper on "Malarial Fever." Discussion.

Adjourned.

H. Q. WHITE, Secretary.

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ADDRESS

ADVANCING STANDARDS IN MEDICAL PRACTICE *

T. C. KENNEDY, M.D.

President Indiana State Medical Association
INDIANAPOLIS

I wish at this moment, gentlemen, to thank you sincerely for the honor you have conferred upon me. I want to assure you, and I know that you feel assured that my expression of gratitude comes from a grateful heart.

The position of president of this society is one entitled to great esteem and he is lukewarm, indeed, who fails to appreciate the dignity it bears. It is an office filled with hope, expectation, trust and confidence. It brings its cares, its misgivings and its disappointments as well as its pleasures, its ambitions, its joys and labor, the last of which has been a delightful task. During the year I have had the privilege of attending the meeting of many county societies and the meetings of nine of the district societies. These meetings were well attended and the subjects comprising the programs were well handled and enthusiastically discussed. I compliment the members of these societies for the splendid work they are doing.

It is rather a peculiar fact that but few men in any profession measure up to the full standard of expectation when they are made the presiding head of an organized body, this mainly for the reason that there are those so constituted that they are never satisfied. We all have our likes and dislikes, call them "whims" if you will; they cling to us whether they be good or bad. We have our opinions: we look at conditions from

different view points; we observe from many angles; we travel diverging roads of inquiry, yet we are striving to reach the same conclusion. If I have differed from you in any of our aims or understandings it has not been from any selfish motive or purpose but simply because all men do not see alike, each of us being entitled to our opinions as well as our sentiments which we should be honest enough to express clearly and openly.

We are living in a wonderful age and a more wonderful day. Never was there a time when the minds of men were so engrossed in the solving of great and live problems as now and never before were there so many great and vital problems to be solved. Room for advancement and golden opportunities for achievement are observed on every hand by the inquiring mind. Scarcely a day but what heralds the accomplishment of a heretofore seemingly impossible result. Science and scientific men think, act, speak, and lo, wonders are performed. Apparently in a day cities and even countries that through ignorance have remained in mediaeval darkness and almost uninhabitable by white men are made places of pleasure in which to live. Where pestilential fevers and their long train of kindred ills have swept their thousands of victims into crowded graves there now blushes the rose, the lily breathes out its fragrance and climatic conditions prevail that are more marvelous than the fancied stories of the wildest imagination—marvelous and wonderful because they are true. And I am proud to say that the real potential power that is moving this transformation scene is the medical profession of America.

So fast are new discoveries, new developments and new results brought before us that they "do tread upon each others heels." In this whirlwind of activities our profession is not caught up and smothered for want of preparation to receive

*President's address read before the Indiana State Medical Association, at the Annual Session held in Fort Wayne, Sept. 29, 1910.

these new truths but rather are we appropriating these discoveries and in our laboratories we are converting them to our wants by making them applicable to our needs, thereby rendering them useful to our fellow men. It is more than gratifying to be able to say that every day witnesses an advancement in our profession—that every day we really accomplish results heretofore only hoped for but now fully realized. These new forces, these new methods, these new practices are the result of deep and constant research—they are the new awakening of hidden possibilities; they are ours to more fully develop if we only but will and surely it is our bounden duty to make the very best use of them. There is no middle ground for the medical profession. It cannot be backward; its aid and its ambition is to higher and loftier achievement. "We should never give up what we have the least chance of accomplishing," says a high authority, and the saying is well worth remembering.

That the minds of individuals differ on the themes, the theories and the practices which we, particularly as a profession, are called upon to and do investigate; should not be the cause for criticism. The world is wiser than ever before; the people are critical not alone on special subjects but also on general topics. The people are reading, they are investigating, they are learning. In this day of sun light no professional or public men need hope to step upon the stage of publicity without having the spotlight turned on him. What we must do is to thoroughly intrench ourselves by thorough rudimentary preparation, followed by hard and persistent effort to gain knowledge, that at all times we will be ready to meet any criticism that may be pointed at us. The day of *being near* to something has vanished. The time is here when we must *get there*.

To differ is an inherent right. But let us remember that from honest differences springs much good. By investigating a subject by many methods we secure a greater amount of information; by dissecting it we get nearer to the real facts.

Coming down the ages are two admonitions:

"There is nothing new under the sun," and
 "In the sweat of thy face shalt thou eat bread."

The first tells us that in the beginning God created all things; that all future development was made possible. The second tells us that by proper effort we can reveal the creation and use it—use it for either good or evil. I have a friend who thinks and believes that every so-called "new discovery" is nothing more or less

than a "revelation"; that the person receiving the new information received it through a vision—perhaps after months or even years of toil and study—but none the less it was "revealed" to him—that it was not new but simply found its way into use through the medium of the person who prepared himself to receive the new truth and give it to the world. I will have no dispute with my friend because of this belief. What we all want is more preparation, a larger vision and more revelations and a wider and better ability with which to more properly handle the great questions that confront us.

With the on-rush of the world there is no longer use or place for a lazy or a slothful man. It has been tersely said "That a dead man is better than a lazy man because he takes up less room." That assertion is a compound truth and I am glad that we have reached the time when a lazy man can no longer find a lounging place within the activities of our profession. The day of our forefathers is but a pleasant and pleasing memory. They went horse-back over corduroy roads while we are demanding the airship for more speedy conveyance. They had more time than we because they required it and because they battled with slower development, had fewer opportunities but made the very best of them and left us a glorious heritage.

There are many topics I would like to bring into this paper but I will touch but one or two and then enlarge on the vital subject of the preparatory work and the education necessary to become a successful physician.

Let me admonish you to be loyal to your county medical society. In these meetings you can discover and polish real precious gems. There is nothing better for the broadening of the mind than free discussions of live and pertinent topics. The district meetings should have your time and attention for there you get a wider acquaintance. Take care of these meetings with enthusiasm and the State Association will prosper. It is the application of the old rule "Take care of the pennies and the dollars will take care of themselves." Properly attending to little things renders hard tasks easy.

The pressing present has pushed us to the period when a doctor and a lawyer are no longer regarded as two of the seven wonders of the world. We are so loaded down with both that their feet are hanging over the edges of the earth. What we are to do with all the doctors that are to be graduated from our schools is a question for thought. To the tap, tap, tap in the march of life we must all step to time or fall by the wayside and should we fall out of the ranks we will

find no friendly ambulance to give us a lift. People have changed with the tread of events, in other words, the live men with real potentiality have changed the course of the times. The country or district schools, the city high schools, the colleges, and the universities are furnishing us with an educated people who become our patients. When we visit the sick room it is to meet and to administer to a person of education, social and refined in demeanor and with advanced attainments and surroundings. These persons are demanding of us strenuously that we know our calling. It is to this theme of higher education that I will now confine myself. Permit me to say that many of the thoughts herein have been gleaned from various sources but more particularly from the elaborate report made to the "Carnegie Foundation for the Advancement of Medical Education," with which you are all familiar.

That the requirements for a medical education have enormously increased, there is no question. The demand now is that the person who desires to take up the study of medicine for the purpose of practicing the same must first lay a strong, a safe and a sound foundation for his future work. "The fundamental sciences," says a writer, "upon which medicine depends have been greatly extended and to these must the aspiring student apply his energies before he can hope to take the next upward step. The laboratory has come to furnish alike to the physician and to the surgeon a new means for diagnosing and combating disease. The education of the medical practitioner under these changed conditions makes entirely different demands in respect to both preliminary and professional training."

A declaration of that character brings us face to face (in the fast advancing standards of the best medical schools) with the old proposition of the "Survival of the fittest." Who now dare take up the practice of medicine unless he is thoroughly prepared? As has been mentioned, the public is consciously concerned in the right preparation of the man who says he is ready to engage in the practice of medicine. And why not? We want and demand a highly competent attorney if we want one at all and none of us cares to listen to an incompetent and an uneducated preacher and we even demand snap, energy and punctuality on the part of our grocer and we take the advanced step for the sake of pure food and better health that our butchers and dairymen must be competent and that they know how to properly care for their stock. These assertions being true, then how much more important it is to know that the physician is well grounded in the fundamental sciences upon which medicine

is founded and that he has skillfully prepared himself for the practice of his profession. A distinction is being made in these close days of observation between the well-trained physician and the physician who has had no adequate training whatsoever. The underlying thought of this proposition is that the young man who feels that he is called upon to enter the field of medicine must thoroughly acquaint himself with the primary principles underlying the profession before he ever enters a medical college. "Readin', 'ritin' and 'rithmetic" will no longer suffice. There must be first a sure, sound and sane preparation before a student should enter a medical school and after the medical graduation a research that has no end except with the call of time.

The authority mentioned makes this sweeping declaration:

"For twenty-five years past there has been an enormous over-production of uneducated and ill-trained medical practitioners. This has been in absolute disregard of the public welfare and without any serious thought of the interests of the public. Taking the United States as a whole, physicians are *four or five times as numerous* in proportion to population as in older countries, like Germany."

From this declaration the same authority draws the deduction that this "over-production" is due to the "Existence of a very large number of commercial schools sustained in many cases by advertising methods through which a mass of unprepared youth is drawn out of industrial occupations into the study of medicine."

The charge is then made that—

"Colleges and universities have in large measure failed in the past twenty-five years to appreciate the great advance in medical education and the increase cost of teaching it along modern lines."

I know, and we all know, that the plea comes from many quarters that without the class of schools mentioned there would be no chance and no opportunity for the "poor boy" to enter and pass through a medical college, receive his diploma and "enter upon the practice of his chosen profession."

My observation has always been that the "poor boy" who is all aglow with desire, who is aflame with enthusiasm, who is determined to succeed, who has tact and perseverance is the boy who stands at the head of his classes and who carries off the large majority of the prizes, let his chosen profession be what it may. Perhaps, if Abraham Lincoln had been rich he never would have been President of the United States and carved for

himself a name that grows brighter with the flight of the years.

It is the poor boy who makes his poverty an excuse who fails in the higher callings of life. The facts are that the brightest, the most successful and the best known men in the professional, political and commercial world are the men who started from lowly positions in life. It is no argument that a poor medical school is justified in the interest of the poor boy. We had better stand by the statement that "It is clear that the poor boy has no right to go into any profession for which he is not willing to obtain adequate preparation," hence there can be no harm in declaring that it is better that the poor boy should not become a doctor if he is to be a poor doctor. *Fewer doctors but better doctors* should be the aim of the profession.

"It goes without saying," claims an authority, "that no system of standards of admission to a profession can exclude all the unfit or furnish a perfect body of practitioners, but a reasonable enforcement of such standards will at least relieve the body politic of a large part of the difficulty which comes from over-production, and will safeguard the right of society to the service of trained men in the great calling which touches so closely our physical and political life."

By this plea for a higher standard of medical education, for a more careful preliminary preparation, I but safeguard the interests of the public and the future wellbeing of all would-be medical students. It is only an ascendancy to higher ideals, the doing of better things which leads to still loftier ambitions and the reaching of better ends. What I have said is not new doctrine but the application of old facts to new conditions.

If we would but stop and consider the real chances a young medical graduate has of securing a successful practice it would be to shudder. If the young men who are knocking at our doors and wanting and are waiting for our practice could but realize the real conditions with which they will be confronted many would hesitate.

Are you aware, gentlemen, that in our good state of Indiana there is now a doctor for every 558 inhabitants? Is that not a condition to cause one to halt and question himself as to whether he is really ready and equipped to enter into and compete in a profession now so overcrowded? "Oh!" the young graduate exclaims, "Indiana is not the only state in the Union." That statement is generally conceded to be the truth. But let us turn our faces in other directions. Alabama, with its mixed population, has a doctor for each 924 persons. Arkansas, where they need some real active men to sanitize the state, has a doctor for

each 582 persons. California, where they sell climate by the square foot, has a doctor for every 401 of her population. Colorado, filled with tourists and with people in quest of better health, has a doctor for every 328 of her inhabitants. Connecticut, where they make "wooden nutmegs," has a less crowded condition with only one doctor for every 740 persons. The District of Columbia is not beckoning to the young medical graduate because she needs more doctors, for she now has a doctor for every 262 persons and half of them are away half of the time. Georgia, with her watermelons and peaches, gets along with a doctor for every 886 of her people and over in Illinois they worry along with a doctor for every 586 inhabitants. Iowa, one of the greatest of the states, is not hungry just now for more doctors because she has one for each 605 persons. Kansas has a doctor for each 628 persons and Kentucky comes along with her cure for rattlesnake bites, with a doctor for each of her 649 citizens. Maine, the state that went for Governor Kent, has a doctor for each 600 population. Massachusetts is well supplied with a doctor for each 567. And so the story runs. There are but two states that can furnish a field where there are more than 1,000 persons for each doctor, these being North Carolina, with one doctor for each 1,110 persons and South Carolina, with one doctor to each 1,324 persons.

With such an overcrowded condition as these figures imply am I not right in advocating fewer, but better schools; fewer, but better doctors? I feel that it is not only our duty as practicing physicians but it is also our duty as citizens to insist and demand that our Legislature make ample appropriation for the full and complete equipment of our state school. To this end we should all work and if it is necessary we should petition our lawmaking body to this end that we may not only maintain our present high standard but that we may take the front rank in medical education. In comparison with all the other states Indiana is even now distinguished and is noted for the advanced steps taken. But this should not be sufficient. We want and are after the best. For the position our state now holds I want to give credit to the gentlemen who have preceded me in this office; I want to give credit to this State Association and to our district and county societies. I want also to give unstinted credit to Dr. J. N. Hurty, who never sleeps at his post of duty and who is living and teaching twenty years ahead of his day. Posterity will rise up and call him blessed.

As words of encouragement I wish to read from the Carnegie Foundation report the follow-

ing in regard to the general conditions as observed by that authority in Indiana. Listen while I read:

"The situation in the state is, thanks to the intelligent attitude of the university, distinctly hopeful, though it will take time to work it out fully. The university has just secured complete control of the Indianapolis school. The State Board has already come to its help by making the two-year college standard, in force at the university in 1910, the legal minimum for practice within the state. This places medical education in Indiana as it already is in Minnesota, in the hands of the State University. The Bloomington department has been of such a character that it was easily possible to make it worthy of college-bred students, but the detachment of its teachers for regular service at Indianapolis should not long continue. While it is highly important that close relations be encouraged, it is necessary to accomplish this by progressively strengthening the Indianapolis end.

"The Indianapolis school has been of the ordinary local type of the better sort. In order to make the school attractive to highly qualified students, it will be necessary—

First—To employ full-time men in the work of the first two years.

Second—To strengthen the laboratory equipment.

Third—Greatly to improve the organization and conduct of the clinical courses. The trustees have formally committed themselves to this policy. It would appear necessary for some years to regard the needs of the Indianapolis department as a first lien on the increasing income of the university, if the university is to make good the ideals indicated by its entrance requirements. It can do Indianapolis no greater service in any direction. That done, Indiana will be one of the few states that have successfully solved the problem of medical education."

Surely these are words of strong commendation and we know they are worthily bestowed. Taking this as a cue it should not be long before Indiana has a Johns Hopkins and the fact that this authority feels that it is fully warranted in making so favorable a report on the existing conditions should be sufficient incentive to urge all the members of the profession in the state, as well as the citizens at large, to set about to realize the possibilities therein mentioned.

In my humble way I advocate this higher standard of education in our profession. I do not believe that a man can become a successful specialist without first the experience of a general practice—that he must be acquainted with general condition before he can well know any one particular condition—in other words that he "should know *something of everything and every-*

thing of something." In the same manner I deem it absolutely necessary for a young man before he enters a medical school to qualify himself for the hard task he will find spread before him.

Let me suggest and press upon your attention that now is a good time to make a strong appeal for our State School. It is the one object worthy of our best effort. Likewise let us labor for the tuberculosis hospital; the bacteriological laboratory and all other institutions of research associated with and connected with our profession. Let us join hands in the work of sanitation, the purification of our streams, in the condemnation of unsanitary school houses. If a school house, on proper investigation, is found to be unclean and it cannot be made clean, pull it down regardless of the tax levy. We cannot place in jeopardy the health and the lives of the children of the state because of the saving of a few dollars. With some persons the mosquito and the house fly are a common joke but their death dealing ravages are now fixed facts. Perhaps we cannot get rid of all of them but we can greatly modify the harm they are doing if we but try. These things are along our line of work and we can hurry in the day of preventive medicine by preventing disease by sensible sanitation. I am dealing with vigorous facts and am not dreaming. In these days of scientific research it seems that nothing is impossible. We are eating our bread in the sweat of our face and the more we sweat the whiter will be our bread. That "old saw" that "an ounce of prevention is better than a pound of cure" contains more truth than was ever attributed to it. It may be true, and hasten the day when it is so, that we can educate the masses and by so doing work such wonders that the services of a physician will be occasional and not frequent. That is what we are here for.

What we want, need and must have in order to accomplish these results is genuine enthusiasm—the same brand of effort that causes the men of "frenzied finance" to put millions into a business proposition. Recently one of these "captains of industry" said that the "only difference between a rut and a grave is in their size." If any of us are in a rut let's get out of it in order that we may longer keep out of our graves. "Up-to-date to-day will be out-of-date to-morrow" unless we have a mind open to seize our opportunities and thus keep up with the procession. There can come no reward without labor. "No man knows it all and the fellow who thinks he does is standing on a banana peel placed there by the fool around the corner."

If there is any fault to find, if there is any room for criticism among us it is because of a

lack of enthusiasm. We have the ability, we possess the strength of character and we are capable of putting up a long and a hard fight. What we want is more zeal, more determination, more real fervor. To be enthusiastic we do not necessarily need to be fanatical or visionary. Our imagination need not become distorted or run riot and we can be enterprising without becoming an army of cranks.

I realize that comparisons are always deemed odious but I am going to take the risk of declaring that if every practicing physician in the state of Indiana would throw into his every day work the same amount of enthusiasm, the same amount of money expended, the same organization, the same amount of time employed, and the same amount of genuine hard labor as the professional politicians use in their business that within a very short period Indiana would become world-wide in reputation for results accomplished in medical research.

There is no reason why Indiana should not have as good a medical school as brains and money will furnish. Every force necessary to bring this about is at hand. We need organization to properly use these forces. We must educate our people to their direct needs. There is no cause that cannot be won if it is worthy of accomplishment. We cannot afford to keep still while hundreds, yes, even thousands of our people are being carried away annually by the great "white plague." We must get next to the existing powers—the members of our legislature—we must get back of the politicians to their constituents and demonstrate to them the vast importance of aiding in the conquering of disease. We must show to the people of Indiana that it is cheaper to prevent disease than it is to cure it; and once we do this Indiana will win a glory and a fame that cannot be dimmed for when the people grasp these ideas and see them performed their zeal and their desires for even greater accomplishments will continue to grow.

Our responsibilities in this matter are personal. By individual effort every county medical society in the state can urge on the member of the legislature from that county what the people of the state so sorely need—that it is not more politics but less disease—not more or less tariff but more money for the better education of our young men—that what we need is better health, fewer funerals—better sanitation and fewer fevers.

The one great cause that should challenge the attention of the people of all classes in our state, and all states, is the continued, wise and helpful legislation to assist in making our citizens more healthy. We legislate against "lumpy jaw" in

cattle; we legislate against the distribution of noxious weeds; we legislate against the seining of fish and we fix speed limits for automobiles, and yet we sit almost idly and supinely by when it comes to the vital question of legislation in behalf of the conditions that underlie the physical welfare of our citizens. On this point we should pray for an awakening and a new baptism of determination that will give us sufficient faith to ask for the dire requirements of humanity. It is cheaper to pay a small additional tax than it is to pay doctor bills and it certainly is more pleasant to enjoy good health than it is to be sick—points that people will not be slow to grasp. These are facts that in my opinion should go to the people in their true light.

I am not afraid but what the worthy physician and surgeon will always have an ample field in which to practice. We will not forget as we go along that man was born of woman, that he has but few days on earth and that they are mostly filled with trouble. Our mission in life is to make these few days, from a physical standpoint, as pleasant as possible.

I thank you for your time, your kindness and your patience and I only hope that in this effort some good thought has been brought to light and that we all may be benefited thereby.

ORIGINAL ARTICLES

CARCINOMA OF THE FRONTAL SINUS *

G. W. SPOHN, M.D.
ELKHART, IND.

Mrs. C, aged 56, was first seen by the writer, May 28, 1909. There was no history of carcinoma. Examination revealed the left nostril filled with polypi; an elevation of the skin over the frontal sinus and an intense pain, due to a pressure upon the brain. The sero-mucus, or sero-purulent discharge and the odor from the left nostril were those significant of nasal polypi. She gave the history of nasal polypi of many years standing. A number of years ago, a physician pulled out the polypi, with a forceps, but the nostril refilled soon after, as is the rule in these cases unless the cause is removed.

Under ether anesthesia the polypi and the left middle turbinate bone were removed. The intra-nasal operation upon the sinus was done, and the sinus packed with iodoform gauze. The pain

*Read at the Tenth Semi-Annual meeting of the Thirteenth District Medical Society, Nov. 19, 1909, at Warsaw, Ind.

and pressure symptoms were relieved only for a few days.

June 3, an external opening, the modified Kilian, was done. It was found that the sinuses formed one large cavity, with no septa. This was filled with a gelatinous substance, somewhat resembling fibrinated blood clots. There was no necrotic bone in the nose, before the removal of the turbinate bone. But above this the necrosis was extensive. It had extended to the orbital plate, the ethmoid cells, the sphenoid sinus and the posterior plate of the frontal sinus, thus exposing the brain. The malignancy of the disease was evident from its extensiveness, involvement and hemorrhages. The sinus and surrounding parts were curetted and packed with iodoform gauze.

The patient was given *x-ray* treatments for a few weeks, but with no beneficial results.

The tumefaction over the sinus was so rapid that drainage was impeded, thus bringing on pain and symptoms of pressure on the brain. July 3, the tumefaction was removed, the external opening over the sinus enlarged, the nasal bones removed, the ethmoid and sphenoid sinuses removed. The last operation gave relief from the pressure upon the brain, but it did not check the progress of the disease. The patient died August 19. The immediate cause of death was about the same as in all of these cancerous cases, impairment of nutrition, pain, loss of sleep, anxiety and general inanition.

After the second and third operations, specimens were sent to the pathological laboratories at Bloomington and Indianapolis. The findings and diagnosis were the same from both laboratories. Here follows the laboratory report:

PATHOLOGIC REPORT

Sent by Dr. G. W. Spohn, Elkhart, Ind., July 5, 1909.

Source of Specimen.—Tumor from frontal sinus.

Gross Features.—The section consists of a new growth made up of epithelial cells of squamous type growing in the form of irregular nests having the peripheral portion made up of cells following the type of those in the deeper layers of the epiderm, while the central portion shows masses of flattened plate-like cells similar to those of the superficial layer of the epiderm. So-called pearly bodies are plentiful in the centers of the nests. The interstitial connective tissue is highly cellular in character.

Diagnosis.—Squamous Epithelioma.

(Signed) HENRY R. ALBURGER.

Carcinoma of the frontal sinus is rare. In looking up the literature on cancer of the upper respiratory tract the writer failed to find the record of any cases. Keen says, "Malignant

growths of the frontal sinus are rare, and usually invade the sinus secondarily, their origin being in some other locality."

Carcinomata in the nasal passages, the pharynx, tonsils, larynx and upon the tongue are quite frequent. There are also some cases reported of cancer of the maxillary sinuses. J. Bland-Sutton says, "Bolam has carefully studied the histology of primary epithelial tumors of the mucous membranes, and has satisfied himself that the structure of some of them indicates that they arise in the glands of the antrum. My independent examination of some of my own cases leads me to take the same view."

The writer read an article, but at present can not give the author's name, wherein it was claimed that cancer of the sinuses was caused by polypi or some obstructions, interfering with proper drainage. It is doubtful whether this could be proven; but even if it cannot, a polypoid state of the mucous membrane should not be considered lightly. Polypi in the nares or any other interference of sinus drainage may lead to serious results. The ordinary polyps of the nose have an etiological factor back of them. It is a condition that needs correction. The pulling-out process, for their removal, is not good surgery. The snare does the work beautifully, without the destruction of healthy tissue, and with the smallest amount of pain to the patient. The question naturally arises, is the polypoid condition caused by the diseased sinus, or is the diseased sinus the cause of the nasal trouble? Perhaps the latter. There must be a diseased or degenerative state of the mucous membrane, before the polypi can form. Though there are some exceptions, yet it is a safe rule, where there is a polypus, there is a diseased sinus, the discharge of which caused the polyps. It is for this reason, that polypi reform so often. Correct the source of the sinus trouble and the polypi will disappear by absorption. Thus the removal of polypi is only the beginning and the simplest step towards the correction of a sinus infection or empyema.

In the case reported, when the polypi were removed ten years ago—if the case had been followed up with the proper after-treatment the chances are that the woman might be living to-day. The clearing of the nostrils, and the establishing of nasal respiration, should have been followed with proper frontal sinus drainage.

This is only problematical. The writer does not wish to convey the idea that the myxoma was the direct cause of the epithelioma. But the irritation and disturbance, caused by the occluded nares and the interference with frontal sinns

drainage, might cause a malignancy. Cancer of the mucous membrane of the mouth is frequently attributed to some irritant. Cancer and polypi have been found in the nose at the same time. Kyle quotes Bilroth, as saying, "he discovered that a malignant tumor could spring from a mucous gland of a polypus."

The pathology of benign and malignant tumors is known; but the transition of a benign to a malignant is not understood.

Nasal polypi or myxomata are tumors that are filled with a viscid or jelly-like substance. It is in reality a raised point of the mucous membrane, filled with serum or muco-serum. Some writers say the pathological condition is caused by an edema of the mucous membrane. This is quite true. No doubt the origin of the hyperemia or edema is due to some interference with proper nasal drainage. Because polyps are very often found inside of the turbinate bone, or because said bone must be removed before the nostril can be freed of polypi, is no argument that they originate from necrosed bones or from the periosteum. An edema or hyperemia of the middle turbinate body, continued for a long time, will cause a periostitis and later an involvement of the bone. Polypi will not form upon perfectly healthy tissue. Proper nasal and sinus drainage, and proper nasal breathing will cure nasal polyps. In a high atmosphere, with a dry, warm air, these cases obtain relief very quickly.

Nasal polypi undergo changes. Those of long standing become hard and firm, in fact in years they change to tumors that are quite fibrous. The writer has seen them where they were as hard and firm as fibromata. This knowledge is definite, because cases have been under observation for ten and fifteen years.

It is a common occurrence with some patients to have a slight rhinitis occlude or, at least, partially occlude the fronto-nasal duct. Such a pathological state is soon followed with an edema of the infundibulum. If allowed to continue, polypi form in the middle meatus at the point where the infected discharge passes out. A deviated septum or some nasal obstruction, no doubt, is generally the cause of the reduced lumen of the duct that leads from the frontal sinus to the nose. If the nasal polyps are allowed to continue, there is no reason why the edema cannot follow the naso-frontal duct to the frontal sinus, causing a periostitis and even necrosis of the sinus. From the literature upon this question, one would conclude that the irritation caused by

these pathological conditions could lead to a malignancy.

The American Text-Book of Surgery says "Any thing which acts mechanically or chemically to maintain a slight but constant hyperemia of parts stimulates the physiological multiplication of the epithelial elements."

In the *A. M. A. Journal*, last issue, Dr. W. S. Newcomet, of Philadelphia, says "The cause of cancer is still unknown, although irritation enters largely into its production. Continued mild irritation produces carcinoma."

These are the opinions held by many of the leading surgeons, x-ray operators and pathologists.

THE MAN AT YOUR ELBOW*

HARRY MILLER, M.D.
MARION, IND.

It is right and in accord with the fitness of things that the man who has forged past us and taken his place well toward the head of the column should receive the consideration due to him who achieves, who wins in the struggle.

This homage that the rank and file pay to him is a part of racial wisdom, transcending the wisdom of any human atom—an applause that drowns the jealous mutterings of those who compete in the contest with the victor.

The man on the pedestal, however, will always receive the honors he merits, when once his feet are firmly planted. You and I will join our cheers with those of the multitude and do it without solicitation.

My plea to-night is for him whose voice swells yours in praise of the man ahead, for him who runs at your side, whose trials are your trials—the man at your elbow.

Just as distance minimizes the shortcomings of the man on the pedestal to his flattery, so does our very nearness to our professional neighbor magnify his faults and blind us to his virtues.

We have long known what a rôle propinquity plays in affairs of the heart. It is equally as important a factor in antagonisms, blind, cruel and primitive, antagonisms that dwarf soul and intellect.

In order to get at the basis of this state of affairs it is necessary to turn the searchlight of conscience on the workings of our own minds, and if the illumination is rightly timed we will be surprised to see, scampering like imps in the

* Toast delivered at Eleventh Councilor District Meeting held at Delphi, May, 1910.

background of our good intentions, many unworthy ideas.

The conduct of some of us justifies the conclusion that we regard the success of a neighbor as a personal offense, and the nearer that neighbor, the greater and more unforgivable becomes the offense.

It has been said that if we would have friends we should be one. Our attitude then toward our neighbor, our fellow practitioner, should have serious consideration if that attitude is to render him friend and helpful associate, instead of belligerent competitor.

Though our intentions are good it is well to remember that if there is one blind spot on our intellectual retina, it is our inability to see our own shortcomings.

The tyrant in some of us would make our associates doff their hats in concession to us, while we do nothing to foster a relationship as helpful to ourselves as to our fellows. To such a one friend means vassal. This is a reflection of our four-legged selves, the mental survival of elaws and tusks that have been shed along the pathway of the cycles.

This is a strenuous age, but admiration for power, regardless of whether that power is exerted for good or for evil—the making of a fetish of the bloody jowl of the conqueror—belongs to the past, and the time is not far distant when he who meets advances of fellowship and good will with a storm in his breast, a storm that stifles every lofty impulse arising in the heart of his neighbor, will be ostracised as a psychic highbinder.

Regardless of our own happiness and interests and those of our fellow practitioner, the patient should be considered. When we know that the state of the physician's mind on entering the sick-room is a factor in professional success, just as the condition of the surgeon's fingernails is a factor, we are bound to conclude that the belligerent doctor who radiates turbulence and antagonisms, is a professional misfit, and to the sensitive patient a positive menace.

It has been elaimed that social and professional friction grinds away the rough places in our character and makes eventually for harmony. It is not so in the development of the child mind, and it is not necessary to the ethial development of the adult. Rather should we resort to the polishing process of self-discipline, and honest contemplation of our own faults, to wear away the exostoses of envy and jealousy and selfishness, that are our heritages from the shadows of the past.

From the time a living thing first swallowed its fellow, selfishness has filled only stomachs, has builded only bodies, it has never added a single line to the stature of a soul. Nor is it necessary for us to render ourselves spineless creatures by an attitude toward our professional brother that invites his friendship. Strenuous manhood should never be confused with brutality. No man, however intellectual, is ever really great until he grows a heart as big as his head.

The laws of the universe decree that the struggle shall go on, and to that decree we must bow, but we can rob competition of its savagery, we can cast back among the bones of extinct monsters where they belong, the ugly mental qualities that through so many ages made brotherhood a mockery; we can bring down to twentieth century ideals the articles of war as they apply in a social and professional way.

Not without reason, other than malicious gossip, should we doubt the loyalty of our fellow practitioner. We should be zealous in good will rather than in materializing suspicions. Some of us are so apprehensive of personal affront that we cannot read the Psalms of David without having our feelings ruffled. As we have felt the need of encouragement ourselves, so should we bestow encouragement upon our professional brother. You and I know that good words rightly and timely spoken have straightened more crooked spines than all the orthopedic surgeons in the world.

Above and beyond all these things we owe this attitude to our profession—a profession that has had to fight the powers of darkness to secure every law that has ever been enacted, looking to the betterment of the public health; a profession that has done this to its own impoverishment; a profession through whose inspiration the plague spots of the earth have been made habitable; a profession that stands at the side of the pulpit with scientific proof that right living pays in this life a thousand fold, and pays in the best coin of the realm.

If each member of the medical profession would only meet his brother a little more than half way, whereby the lap of fellowship would render it possible for us to be welded into a harmonious whole, that profession would come into its own, would reap the harvest of respect and affectionate regard to which it is so justly entitled. These are the reasons—a few of them—for my commending to your kindly consideration, to your greatest charity, the man at your elbow.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 330, vol. III.)

MEDICAL HISTORY OF MADISON COUNTY.

Dr. Jonas Stewart, of Anderson, a physician well qualified for the task, has kindly furnished me the following interesting medical history of Madison County:

Madison County was first settled by white men in 1820, four years after the admission of the state into the Federal Union. The first settlement was at Pendleton, near the falls of Fall Creek, in the south part of the county. About one year after the above date, in 1821, a settlement was made at Anderson on White River. Within a few years settlements were also made at Chesterfield, Hamilton and Perkinsville, on White River, at Huntsville and New Columbus, on Fall Creek, and later, also, at Fishersburg, on Stony Creek, near the western boundary, and at Moonsville, on Big Kilbuck Creek, about ten miles north of Anderson. The country north of White River remained for the greater part, an unbroken forest for twenty or thirty years after the forming of the settlements above named, in south half of the county.

The county was organized November 10, 1823, and the county seat located at Pendleton, the oldest and largest settlement, where it remained until 1836, when it was removed to Anderson, which was a more central location. It was not until about this time that settlements were made at Alexandria and Elwood, and still later, at Frankton and Summitville.

The first physician to locate in the county for the practice of his profession was Dr. Lewis Bordwell, who located at Pendleton about the time the county was organized. He is mentioned in the early chronicles of the county, and characterized as a "pleasant, genial gentleman, who occasionally imbibed too freely of ardent spirits, and when intoxicated, sometimes boasted of his success as a practitioner, declaring that he had never lost a patient." He practiced at Pendleton only two or three years, and removed to Iowa, where he died. He was followed at Pendleton by Drs. John L. and Corydon Richmond, the former of whom receives more extended notice elsewhere in these sketches. A few years later, Dr. Edwin Fussell and Dr. M. G. Walker located here, and still later came also the brothers, John H. and Ward Cook. Both Dr. Fussell and Dr. Walker receive honorable mention in Forkner and Dy-

son's History of Madison County, in connection with the mobbing of Hon. Frederick Douglass at Pendleton in 1843. Dr. Walker is credited with saving the life of Mr. Douglass on that occasion, and Dr. Fussell with taking him into his house, and rendering surgical aid to the injured man.

The first physician to locate at Anderson was a Dr. Burt, of whom little is now known. It is said, however, that he was both doctor and school teacher, and that he was a small man, and slightly lame. He remained in Anderson two years, from 1827 to 1829. [I think this is Dr. Dickinson Burt, the first physician, also, to locate in Delaware County. See Jour., Vol. ii, pp. 206, 368 (foot-note), G. W. H. K.]

A Dr. Pegg also located in Anderson in 1828, but still less is known of him than of his predecessor. His residence in the village was of two years' duration, when he was followed by Dr. Ruddell, in 1830. The last-named physician remained seven years and then removed to Broad Ripple, in Marion County, near the city of Indianapolis. In the meantime Dr. Henry Wyman located at Anderson, in 1831, and became the "Nestor" of the medical profession of the county, where he was probably the most prominent physician for a period of thirty years. He will be noticed elsewhere in these sketches. Other early physicians of Anderson, of whom no definite information can now be obtained, were Dr. Carmean, Dr. E. R. Roe, and Dr. Andrew Robb. The first physician at Chesterfield was a Dr. Henry; he located there in 1828. Soon after, we find the name of Dr. Kynett, probably the Dr. William Kynett later found at Fishersburg. We also find evidence that Drs. Balingall and Preston of Middletown, in Henry County, made regular trips for a considerable period, and ministered to the sick of the infant settlement of Chesterfield, but neither of them was ever located in Madison County. Dr. George W. Godwin located at Chesterfield in the early thirties, but later removed to Yorktown, in Delaware County. Dr. David Dunham located in the country northwest of Chesterfield, in 1834. We also find that a Dr. Davis arrived there in 1847. He completes the list of pioneer physicians of the village. Dr. William Goodell located at Hamilton, about six miles west of Anderson, in 1825. No other facts in his history have been obtained.

The first physician at Huntsville was a Dr. McCain, who was both physician and merchant. He had as his successors, Drs. John Hunt and Joseph Weeks, both mentioned later, each in his proper place. Dr. John Horne was the first to locate at New Columbus. This event occurred in 1840. He removed to Middletown in Henry

County, and subsequently to Yorktown, in Delaware County, where he died. He was followed at New Columbus by Dr. Hildreth, in 1842, and Dr. W. B. Bair, in 1844. Other early physicians of New Columbus were Dr. Clark, Dr. Smiley and Dr. Barry.

The first to locate at Fishersburg were the brothers, Drs. James and John Barrett; this was in 1840. Later in the same year, Dr. William Kynett located there. These were followed by Dr. Thomas in 1848, Drs. John Davis and John Williams, in 1850, and a little later by Dr. Thomas Carr. Dr. Thomas Douglass located at Perkinsville in 1840, he being the first in that village, and its leading physician for many years.

In the same year Dr. Robert Douglass located at the site of the present city of Elwood, although the town, first named Quincy, was not laid out until 1853, and did not receive the name of Elwood until 1869. About this time, also, a Dr. McNear located at Moonsville, on Big Kilbuck Creek. The first physician at Alexandria was Dr. W. F. Spence, who came to the county in 1839. After a few years he removed to Jonesboro, in Grant county, where he died. He was followed by Dr. Cyrus Westerfield and Dr. David Perry, and a few years later, by Drs. S. B. and Leonard Harriman. Dr. S. B. Harriman removed to Richmond, Indiana, where he ended his career, and Dr. Leonard Harriman died in Sterling, Kansas, in the last decade of the nineteenth century.

We have thus seen that the location of the first physicians, at Alexandria, Elwood, Perkinsville, Fishersburg, and New Columbus, all occurred about the same year, at least, within twelve months, of the years 1839 and 1840. This was incident to the large increase of population during those years, most probably induced by the work on the Indiana Central Canal, then in construction but never completed.

The first physician at Frankton was Dr. John M. Laughlin, but he did not arrive until 1854. He was followed by Dr. Philip P. Patterson, who married the widow of Dr. Laughlin, and succeeded also to his practice. Other early physicians of Frankton were Drs. Reuben Harvey, W. M. Sharp, and a Dr. Young. There was no physician at Summitville until 1870, when Dr. C. V. Garrell located there. He was followed by Drs. John Wright and M. L. Cranfield. During the decade from 1870 to 1880, Dr. Wm. J. Morgan practiced at Gilman on the border of Delaware County. Dr. Morgan was a charter member of the present Madison County Medical Society. Died October 13, 1896.

The above mentioned villages include all, within the boundaries of Madison County, except Markleville and Ingalls. The latter is a new town and has no medical history. The former probably has a history but I have not been able to obtain it. I find, however, in some of the early records the names of a Dr. Wear, Dr. William Hendricks, Dr. William Swain, and Dr. J. C. Smith, but no further information seems to be obtainable.

The names of other deceased physicians of Madison County, of whom I have succeeded in obtaining some definite information, with brief sketches of some of the more prominent of them are given alphabetically in the succeeding pages.

Prominence is not invariably based on estimated ability, alone, but also on length of period of service, or the number of years they practiced their profession in Madison County.

ARDERY, OSCAR.—Anderson (1859-1897). S. T. 1898, 380, 381.

BAIR, W. B.—New Columbus (18—1863). Located in Madison County in 1844. Practiced eighteen years. Was an active member of the first Madison County Medical Society and was its treasurer from its organization until his death.

BALLENGER, L. P.—Anderson (1851-1884).

BECK, JOHN.—Elwood (1809-1882).

BECK, THOMAS S.—Elwood (1843-1885). Son of preceding Dr. Beck. Native of Ohio. Practiced in Elwood fifteen years.

BRANDON, JOSEPH FRANCIS.—Anderson (1835-1888). Practiced several years at Perkinsville. Removed to Anderson and engaged in drug business, but remained a member of the Madison County Medical Society.

BRUNT, SAMUEL.—Summitville (1849-1883).

BURR, CHANCEY S.—Anderson (1840-1905). Born in Middletown, Indiana, January 10, 1840. Died in Chicago, Illinois, June 4, 1905. Graduated at Long Island College Hospital, 1865. Served as surgeon in the army last year of Civil War. Practiced his profession fifteen years in Anderson, ten years in Mitchell, South Dakota, and fourteen years in the city of Chicago. He was the first mayor of Mitchell, South Dakota.

CARTER, D. M.—Anderson (1834-1893). Practiced a number of years in Anderson. Was a member of the first Madison County Medical Society and was its treasurer after the death of Dr. W. B. Bair. He removed to Modoc in Randolph County, where he died. Is buried at Winchester.

CALLOWAY, BENJAH T.—Elwood (1824-1899). Born in Milton, Indiana, January 23, 1824. Died in Elwood, Indiana, November 30, 1899. Located in Alexandria in 1849; remained only one year, then removed to Elwood where he practiced thirty-nine years. He was retired ten years before his death.

CHANNING, WILLIAM S.—Pendleton (1851-1906). S. T. 1907, 489.

COOK, DANIEL.—Fishersburg (1826-1902). Dr. Cook practiced medicine in Madison County about forty years, part of this time at Markleville.

COOK, JOHN H.—Pendleton (1802-1864). Born in Monroe County, Virginia, April 27, 1802. Died of apoplexy, at Pendleton, November 30, 1863. Educated at Maxwell Academy in East Tennessee. Graduated in medicine at University of Louisville. He was one of the early specialists in diseases of the eye and ear. In this specialty he attained such prominence as to be called to many of the larger cities of this and other states.

He was a fluent public speaker and a ready debater; entered politics and was elected representative in the legislature in 1836. He rendered valuable assistance in securing the first railway through the county, giving both time and money. He also served one term as a member of the Board of Trustees of the State Blind Asylum, receiving his appointment from Gov. Joseph A. Wright.

COOK, THOMAS E.—Perkinsville (1819-1876). Born in South Carolina. Practiced twelve years in county.

COOK, WARD. Pendleton (1808-1894). Dr. Ward Cook was a younger brother of Dr. John H. Cook, above mentioned. Born in Monroe county, Virginia (now West Virginia), October 9, 1808. Died of pneumonia, at Pendleton, Indiana, December 24, 1894. He attended the schools of his native county, and spent two years at Maxwell Academy in Tennessee, after which he taught school and studied under private tutors. He came to Indiana on horseback, traveling five hundred miles in thirteen days. He had studied medicine with his other studies in his old home, and soon after his arrival in Pendleton, he was examined and licensed to practice, by a district medical society convened there. His license was dated October 20, 1832. From 1835 to 1849 he practiced in Virginia, being located at Red Sulphur Springs in his native county. During this period, however, he attended medical college and graduated from the Cincinnati College of Medicine in 1839. He returned to Pendleton March 24, 1849, and resided there until his death. He practiced medicine more than sixty years, nearly fifty of which were in Madison County. He wrote many valuable medical papers, one on "Laceration of the Perineum in Parturition." Trans. 1892, 142.

Dr. Cook was a conscientious and skilled physician and a faithful member of the local and state medical societies, by which he was frequently honored. He was a fine type of the "gentleman of the old school," and a consistent christian, having been a member of the M. E. Church for nearly fifty years. S. T. 1895, 408.

COOPER, W. B.—New Columbus (1828-1868). Began to practice medicine in Madison County, but after a few years removed to Greenfield, Hancock County, where he was eminently successful.

CORNELIUS, W. W.—Chesterfield (1822-1892). Born in New York state, October 15, 1822. Died at Daleville, Indiana, 1892. He located at Chesterfield February 28, 1852, and was engaged in practice there until the spring of 1864, a period of twelve years. He then removed to Daleville in Delaware county.

CRAMPTON, JESSE PUGH.—Anderson (1818-1866). Born in Ohio. Removed to Anderson in 1852. He practiced medicine in Anderson fourteen years. Part of the time was also engaged in the drug trade.

DEHORITY, J. M.—Elwood (1815-1885). Located at Elwood in the early forties. Entered general practice of medicine and became wealthy. For the last fifteen years of his life, was engaged in the mercantile and banking business.

DOUGLASS, ROBERT.—Elwood (1816-1863). Practiced medicine in Tipton three years, New Lancaster three years, and in Elwood about twelve years. Was the first physician at Elwood.

DOUGLAS, THOMAS.—Perkinsville (1818-1863). Was the first physician at Perkinsville and practiced there twelve years. Came from Ohio.

DUNHAM, DAVID.—Chesterfield (1762-1840).

DUNHAM, VALENTINE.—Chesterfield (1812-1882). Located two miles northwest of Chesterfield. Practiced medicine there for forty-five years.

EBERT, WILLIAM H.—Osceola (1820-1896). Practiced in Madison County thirty-four years.

FAIRFIELD, WILLIAM J.—Anderson (1853-1909). Dr. Fairfield was born in Harrison, Ohio, January 20, 1853. Was drowned in the Gunnison River in Colorado, June 27, 1909. Received a high school and partial college education. He attended the Medical Department of the University of Michigan two years and Bellevue Medical College, New York, two years. Graduated at the latter institution in 1878. He was house surgeon of the Battle Creek Sanitarium several years and practiced twenty years in Anderson. He was a "chalk talk" lecturer of no mean ability, and sometimes employed his talent in this line for the edification of medical societies. Removed to Delta, Colorado, in 1907. Early in 1909 he was appointed a member of the advisory board of the University of Colorado.

FISHER, H. G.—Fishersburg (1836-1876).

FORKNER, THOMAS B.—Florida (1839-1869).

FREE, CYRENIUS.—Prosperity (1828-1884). Dr. Free was a charter member of Madison County Medical Society.

FRITZ, PERRY L.—Alexandria (1865-1899). S. T. 1900, 323.

FUSSELL, BARTHOLOMEW.—Pendleton (1794-1871). A native of Pennsylvania. Returned to his native state. Is said to have weighed about four hundred pounds.

FUSSELL, EDWIN B.—Pendleton (1813-1882).

GARRETSON, J. M.—Perkinsville (1821-1886). Born in Tennessee. Practiced in county thirty years.

GODWIN, GEORGE W.—Chesterfield (1799-1865). Removed to Yorktown in Delaware County.

GUYSINGER, JOHN S.—Florida (1816-1906). A native of Pennsylvania. Died in Pendleton, Indiana, in 1906, at the age of ninety years. He practiced his profession in Henry and Madison Counties about sixty years; the first third of this period was in Henry County. He was three times married and reared a family of fifteen children. He retired from practice and moved to Pendleton a few years before his death.

HOCKETT, ZIMRI.—Anderson (1830-1890). Practiced in Anderson twenty-five years.

HODGES, FRED JENNER.—Anderson (1865-1901). Practiced in Anderson eight or nine years. Removed to Ashland, Wisconsin, where he died.

HORNE, JOHN.—New Columbus (1814-1880). Was the first physician of New Columbus. He located

there in 1840. Removed to Middletown and subsequently to Yorktown, Delaware County. S. T. 1881, 240.

HUNT, JOHN.—Anderson (1817-1895). Was born in Wayne County, Indiana, and died at Springdale, Arkansas, July 23, 1895. As a boy he came with his parents to Madison County as pioneers. They gave their name to the village where they settled—Huntsville. Began the practice of medicine there in 1839. Some years later he removed to Anderson and subsequently to a farm in LaFayette township, but in each of these locations his field of practice covered the larger portion of the county. Dr. Hunt was one of the most prominent physicians of his part of the state for more than thirty years. He was a man of splendid physique and unusual intelligence. His advice as a physician was widely sought.

He was also a politician of local reputation, being for many years the leader of his party in the county. It was said that he could sit on the stone steps in front of his office on the public square and dictate the nominations made by his party for all the county offices. He served as state senator from Madison and Hancock counties in the legislative session of 1851 to 1853. He was also treasurer of Madison County, 1860 to 1862. Was present at the Medical Convention at Indianapolis, June 6, 1849.

HUNT, JOHN WALTER.—Anderson (1850-1904). Nephew of preceding. Practiced at Alexandria for a number of years, then removed to Anderson, where he enjoyed a large practice until his death.

HUNT, WILLIAM A.—Anderson (1822-1889). Dr. William A. Hunt was a brother of John Hunt and father of preceding. He was a small boy when he removed with his parents from Wayne County, where he was born, to their new home at Huntsville. He first taught school, then studied medicine and graduated at the Starling Medical College, Columbus, Ohio. For many years he lived on an elegant farm four miles north of Anderson, where he built up a large practice. He removed to Anderson in 1868 and, with a short interval in the drug business, he continued in practice until a few days before his death. This was caused by pneumonia, after a short illness. Dr. Hunt was a competent physician, well informed, not only in medical, but also in general literature. He was a great reader and a logical thinker. Was also an interested student of natural science, especially of geology. He was also a ready writer and frequently wrote for the local press. He was a steadfast friend of medical societies and was president of the first Madison County Medical Society during the entire period of its existence. S. T. 1889, 214.

HUSTON, A. S.—Anderson (1848-1894). Practiced in Pendleton and Anderson eighteen years.

INLOW, JAMES E.—Alexandria (1841-1899). Practiced thirty years in Madison County.

JONES, THOMAS N.—Anderson (1823-1875). Practiced twenty years in Anderson, having previously practiced at Pendleton and in Hancock County. He was one of the most prominent physicians of Anderson, a successful practitioner and quite popular with the people, but less so with the profession, as he was aggressive in his manner and rather opposed to medical societies. He was a local politician and represented his county in the legislature, having been elected as a member of that body in 1872. He served

as assistant surgeon of the 2d Regiment Indiana Cavalry and later as surgeon of the 130th Indiana Infantry during the Civil War.

JONES, J. M.—Lapel (1838-1889). Practiced in Madison county twenty-three years.

JORDAN, DEWITT.—Anderson (1871-1901). S. T. 1902, 416.

KILGORE, TECUMSEH.—Chesterfield (1839-1876). Practiced medicine at Chesterfield about ten years. Served in the Civil War as assistant surgeon 84th Indiana Volunteer Infantry and later as assistant surgeon and also as surgeon of the 13th Indiana Cavalry.

McCLENAHAN, THOMAS J.—Anderson (1822-1856). Born in Baltimore. Came to Anderson some time in the forties. Was a member of the Indiana State Medical Society, early in its history.

McMAHAN, W. V.—New Columbus (1846-1879). Practiced in the county ten years, part of this at Summitville.

MENEFEER, E. H.—Anderson (1838-1879). A native of Virginia. Came to Anderson about 1860. He served as secretary of the first Madison County Medical Society from 1862 to 1867.

MITCHELL, T. G.—Pendleton (1827-1903).

NUZUM, D. P.—Elwood (1842-1895). Born in Ohio. Practiced in Grant County from 1878 to 1886 and at Elwood from 1886 to 1895.

O'CONNOR, JOHN Z.—Elwood (1868-1898). S. T. 1898, 387.

PARIS, WILLIAM.—Prosperity (18—1865). A native of Kentucky. Came to Indiana in 1825 and was one of the pioneers. Was both physician and preacher.

PARIS, ABSALOM.—Hamilton (1812-1870).

PATTERSON, PHILIP P.—Frankton (18—1866).

PERRY, JOHN W.—Alexandria (1819-1895). Born in Logan county, Virginia, November 29, 1819. Died near Alexandria, Indiana, June 18, 1895. Came with his parents to Madison County in 1826. Located at Alexandria in 1842. Was in partnership with Dr. W. F. Spence, Alexandria's first physician. He practiced medicine in Madison County fifty-three years. For forty-eight years he lived on a farm, but was in active practice. He was a member of both county and state medical societies.

PRATT, JOEL.—New Columbus (1826-1872). A native of Massachusetts. Came to Madison County in 1848. Practiced here over twenty years.

PUGH, JOSEPH.—Alexandria (1820-1895). Practiced seventeen years. Served as treasurer of Madison County.

PUGH, JOSEPH, JR.—Alexandria (1857-1900).

(To be continued.)

THE NATURE OF INSANITY*

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The medical man, critically reading the literature of the last one hundred years, on the subject of insanity, has no doubt noticed two promi-

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nent facts, namely, the absence of medical literature on the normal state of mind, constituting sanity, while volumes after volumes appear on the so-called "mental diseases," "diseases of the mind," "mental derangement," "unsound mind," under the general head of insanity.

All this brings about confusion and lack of a clear understanding of the subject, which arise from the misuse of the words *brain* and *mind*.

If we allow that mind is a function of the brain, which is unfortunately entertained by the laity and part of the medical profession, even then such a misuse of the words is exceedingly improper.

If the words brain and mind be permitted to be used interchangeably, in a scientific medical discussion, then it is equally proper to regard matter and spirit, one a thing perceived, and the other conceived of, as similar entities.

How can a man understand the cause and nature of insanity if he does not know the cause and nature of sanity?

The normal mind is seldom, if ever, discussed by medical men. It is simply assumed that everybody, profession and laity, well understand what sanity really is, and what a normal mind really indicates, but it is not a very simple question after all.

A normal, healthy mind can be conceived of, and so can a normal healthy body be perceived.

There is no such thing as disease of mind. That is an absolutely impossible mental condition. If there is such a thing as disease of mind, then an insane mother must necessarily originate and transmit to her progeny insanity.

But it has not yet been proven that the mother originates and transmits mind to her offspring. That is a creative act, the true nature and method of which are infinitely beyond the knowledge of us all.

How did I get here? I did not make myself. That is quite clear. I was not even consulted in the matter. Some power stronger, or greater, or wiser, or superior than myself was the cause of my getting here. Neither could any man put me here. Neither could any woman put me here. But man and woman combined were but the instruments in such sense of putting me here, and they were but only the unconscious instruments in such event. They did not know nor can they explain, nor any other father or mother explain how the marvelous body and soul were built up into a living, breathing, intelligent human being.

That was a Divine act and exercise of power, as infinitely mysterious as God Himself is mysterious.

It begins to look now that all the titles of the books on insanity will have to be revised and rewritten.

Take the word insanity; it has never yet been defined satisfactorily, only to the author of the definition. No two authors have the same nor anything like the same definition for the word insanity. When an author undertakes to define insanity, he defines it as he perceives it. Now then, he can only perceive matter, and confuses and obscures his definition in such a manner as if it appears from a mental standpoint. The scientific man should remember that naming a thing is not equivalent to explaining a thing. To give the symptoms of insanity is not equivalent to giving the nature and definitions of insanity.

It has never yet been proven that the mind can be diseased.

The only disorders the mind is subject to are moral.

The mind is a something, as distinguished from the body. The mind is not physical. The mind is entire spiritual nature. It is the intellectual, rational faculty of man. It is the intellect. It has the power to conceive. It judges. It reasons. It thinks. It wills. It chooses. It has opinions. It has belief. It has memory. It remembers. It recollects, and recalls forgotten knowledge.

The mind is mysteriously and unexplainably connected with the body during life, and it is mysteriously and unexplainably disconnected from the body at the instant of death.

The normal healthy human being can have intelligent intercourse with the outside world only through one or all five senses. Helen Keller, the most wonderful and most talked-about girl in the world, lost two of her senses, sight and hearing, yet she was taught through the remaining three senses to be an authoress of renown.

So long as the mechanism and fixtures and wires of a telephone system are in first-class working order, intelligence is easily and pleasantly transmitted by one person at a telephone to another person far separated at another telephone. These persons can receive impressions from the outside world only through their respective five senses, and by no other method. In this instance at the telephones, each person receives impressions only through the sense of hearing.

Each intellect transmits intelligence. They reason together over the wire. They argue some proposition. Each one conceives new thoughts from the suggestions of the other. Each one judges and passes judgment. Each one wills and

chooses, and each one has opinions and expresses them.

But allow the telephone wires to become crossed, tangled or torn, then trouble begins and confusion reigns. Gibberish talk results—unmeaning words, unintelligible sentences and broken words flow to the disgust of both persons. All this trouble is easily explained. It is simply a question of physics. The wires are down and distorted. Each person's mind is in normal condition, but each person cannot communicate with the other, because of the physical defect in the telephone system.

That is just the condition of things in insanity. When a man becomes insane it is not his mind that becomes affected, but it is the physical mechanism of his brain that is involved. The persons at the telephone were not insane, and still they were in just as bad a predicament as if one or both had been insane.

The insane man cannot, for sufficient pathological reasons, receive intelligent messages through all his five senses in such a manner that he can understand, reason, or remember or judge right and wrong. It is the brain and brain only that is involved, and then how can there be any disease of mind?

In order to understand what man is, it is important to study his physical body. But the body is not all of man. The physical body is inanimate, and better known as a corpse, but there is a particular something which animates the body and makes it a moving, thinking being, more than a corpse. This spiritual nature must be included in our investigations in order to comprehend what the whole man is.

If the mind is the function of the brain, then the cells of the gray matter in the brain of a boy, having certain arrangements on May 1, are materially changed on May 10, because the boy has learned the multiplication table in the meantime. No microscopist has ever seen "ideas, conceptions, and memories" stored up in the brain cells.

When the unmeaning words and sentences and confusion of noises were passing over the telephone wires there was no physical law of nature violated, no law of electricity violated, no more than was any law violated when the telephone was in good working order. When the wires were crossed, tangled and torn, the law is that each man should hear just the sound that he did hear; that is, the sounds were produced in harmony with the law governing that particular condition at that particular time.

Just so it is in insanity. Impressions from the outside world will reach the several senses. From thence impressions are transmitted in and through

tangled, distorted and twisted nerve filaments; no physical nor physiological law is violated. The condition of the insane man's nerves, nerve filaments, white matter and gray matter cells are in such condition that the whole structures of the nervous system do perform their functions in accordance with fixed laws governing the nervous system in that particular condition that exists at that particular time. The reason that a sane man cannot communicate with an insane man intelligently is, there is a barrier, an obstruction, through which the insane man's mind cannot be reached. In the case of Helen Keller, it would be equally as useless to attempt to talk to her in her presence as it would be to attempt to talk to her through a stone wall ten feet thick. Her mind cannot be reached through the channel of hearing.

Neither can an insane man's mind be reached intelligently through any of his five senses. No intelligence, no impressions from the outside world can properly reach his mind through pathological lesions. In proof of this there are multiplied reasons in support of this proposition.

Let me illustrate:

Medical men well know that there are centers in the brain for everything that is needful for man. Take the speech center. Let a blood clot press upon it and the patient is suddenly made speechless. A man of intelligence and fine education, whose native language was English, was also well versed and could speak the German, the French, the Greek and the Italian languages. He received an injury on his head, resulting in the loss of power to understand or speak English to his friends present. It was soon discovered that he could not understand nor speak German nor Italian, but when two friends came who spoke French and Greek languages, he understood and could speak those languages with facility and smoothness. The speech center is not very large and the native language does not occupy all the space provided, but it seems that Providence in His goodness has provided sufficient room for plenty of languages and for all the talk we care to enjoy.

In support of the convincing argument here given as to the true nature of insanity, let us consider the thyroid gland and its relation to the human economy. It is now known not to be good surgery to remove completely the thyroid gland. The danger is not so much of an immediate disaster, but in the constitutional change which is inherently connected with the loss of function of this organ. But just how and in what manner this gland has such an influence over the entire body is not known.

A condition of disease of the thyroid gland is myxoedema, which results in the entire loss of function of the thyroid. It is a disease affecting childhood as well as adults. The child does not grow so rapidly and is not bright mentally. The tongue is large and hangs out of its mouth. The hair is thin and skin dry and cretinism ensues. The face is bloated and large, the eyelids puffy and swollen. The face is pale and has a waxy and yellow tint. The fontanelles remain open. The child at two years cannot stand alone and does not develop mentally and even becomes idiotic. There are all kinds of idiocy and imbecility produced by myxoedema.

Now as to treatment:

Probably not in all the history of medicine has a more brilliant advance been made than in the rapid and permanent cure of these little people, in the disease of myxoedema. It is wonderful that these children can be rescued from a doomed helplessness of idiocy. And all this is a triumph for which we are indebted to Victor Horsley. The treatment is very simple, being one grain (three times daily) of the dried or glycerin extract of the thyroid gland. The results are marvelous and astounding and unparalleled in the whole range of scientific medicine. In a few weeks a poor, puny, toad-like, idiotic specimen of humanity may be restored to sound mental and bodily health.

Now then, is there anything about myxoedema to indicate that there is any feeble mind or disease of mind in these little victims? No, it is simply a question of pathology and that only.

It must be remembered that mind is not a function of the brain, in the sense of secretions of the various glands of the body. The mind is a separate and distinct entity from that of the brain. The brain does perform functions of transmitting impressions received by the several senses to the seat of nervous centers, provided for the mind to receive them, and the brain does perform functions in reflecting these impressions to other parts of the organism, but that is not equivalent to the brain substance originating and transmitting mind action. Then insanity consists only in lesions of the channels through which impressions are conveyed to and from the seat of mind in the sensorium.

I have been asked that, if there be no such thing as "unsound mind" or "disease of mind" what name I would give for such conditions in harmony with the propositions advocated in this paper. It is not my place to give a name, but

rather, the purpose is to enter a sentiment in opposition to the custom and frequent repetition, by authors and book-writers, of using such phrases as "unsound mind" or "mental diseases."

If these things are true and I verily believe they are, is it not time that all the medical and Webster's dictionaries eliminate the phrases of "unsound mind" and "disease of mind" in their definition of insanity? Is it not time that medical witnesses in court, the entire legal profession, all the judges in all the courts in this and foreign countries, cease to use such phrases, when existing facts do not warrant such custom? Then what is the conclusion of the whole question as to the nature and cause of insanity? All such phrases as "disease of mind," "unsound mind," "mental unsoundness," "hereditary insanity," "psychopathology," are nothing else than misnomers. The facts do not warrant the use of such terms strictly speaking from a scientific medical standpoint. It is equally as unscientific to speak of disease of the mind as it is to speak of medical psychology, or medical mathematics, or medical physics.

There may be diseases of the body and diseases of the white and gray matter of the brain, and in such instances there may be loss of proper functions of a part or parts of the brain and in such instances there may be insanity, but there is no more disease of the mind in such instance than there is disease of God from whence it came.

MENTAL DEFECTS OF CHILDREN. AND THEIR PREVENTION*

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I consider it a pleasure to be able to present to you to-day a paper which I trust will be of some interest to you all. It comes in the way of every general practitioner of medicine to meet with what I call *Insane Disorders*, or *Mental Defects*. I wish to consider these along the line of causation and result, or, from a standpoint of heredity and environment.

Insanity, arising from the same source from which it comes in the adult, is rare in childhood, but mental defects are very common, and grow worse with most startling rapidity, unless wisely handled in their incipiency. All these minor mental deflections, or shortcomings, which may

*Read before the June meeting of the Lawrence County (Ind.) Medical Society, at Bedford, Ind.

escape our attention, form the fertile soil for an everlasting mental condition to take root. Many are the causes of a disturbed or disorganized condition of the mental faculties of the child. Aetive disease frequently disturbs the cerebral functions, and these may not recover with the subsidence of the acute process, even though the structural change be small. When this does occur it is very important to direct even the simplest educational and disciplinary measures, in order to inhibit further lapses and gain healthy tone. My purpose is to call attention to the casual factors which should be scrutinized by the family physician as soon as the least ground for apprehension arises, and, after a consideration of these, point out how to deal with suspicious phenomena.

The causes of these mental states are many and wide-reaching. Some are the outcome of depressed physical powers, due to want, misery and crime. Many more are the results of careless usages, complications, and vice. In certain parental tendencies there is great danger of some form of insanity. Vitiating appetites, as, for alcohol, opium, or even for tobacco, interlaced with other things, are themselves good ground for disease of mind as well as body. Tuberculous families frequently present instances of acute nervous disease, terminating in swift fatalities, and also offering little resisting power against exciting causes. There are families of notably unstable nervous equilibrium, in whom acute disease of emotional disturbances play sad havoc. When these various causes which I have mapped out (with numerous others which I have not mentioned) become superadded one to the other, by the marriage of a tuberculous father to an hysterical mother, or an alcoholic father to an over-conscientious, highly-spirited mother, disease may be predicted for their children. I know, personally, a family in which it is said conception took place while the father was intoxicated, and the result was a boy that has all his life, of sixteen years, acted precisely like a drunken man, and has had an uncontrollable appetite for liquor.

Many observations have been made in which one or both parents were very intemperate, in some one or more things, and their offsprings were imbecile or insane to the same degree, or even worse. This is especially noticeable in regard to sexual disorders. And, again, upon the nervous tissues of an already hypersensitive child, by heredity, exciting causes always act overwhelmingly. Acute febrile disease commonly produces

delirium in a child, which is in itself a transient insanity, and this may pass utterly away, or leave an indelible stain upon the cerebrum. But, after all, the chief factors in the causes of mental defects may be summed up in two words—heredity and strain. The former is responsible for instability of the nervous system, while the latter is multiform in character, comprising all the mental and physical stresses, direct and indirect; and from environment, which may undermine the nervous constitution and bring it to a point of collapse. In determining the factors of heredity, we must not be content with ascertaining the existence of psychoses in the antecedents, but must seek, by careful interrogation of several members of the family, for some of the hereditary equivalents of insanity, such as epilepsy, chorea, hysteria, eccentricities of character, drunkenness, etc.; for these equivalents are interchangeable from one generation to another, and are simply evidences of instability of the nervous system.

The statistics in regard to insane disorders are frequently faulty, because, in the first place the physician fails to inquire far enough into the transmissible neurosis, and, in the second place, the relatives are prone to conceal any hereditary taint in the family. In the class coming under the head of strain the cause may be physical or mental. The childish brain is very vulnerable at all times, and demands for its best development slow and undisturbed opportunities and wholesome conditions. Very much mental stimulus is always hurtful, although intellectual pushing is said by Charcot, not to be harmful, provided other moral and physical conditions are maintained. The emotions evidence themselves first in mere animal delightedness; even then running along the lines of ancestral traits. Here, the parental coloring of mind, habits, or exterior, is shown in curious faithfulness of detail. Even at this stage bad habits may be sketched in upon the receptive centers and form the ground for future calamity.

The existing causes of mental defects in childhood differ in some respects from those of the adult. Digestive disorders, and intestinal parasites, cause a variety of nervous troubles, but very rarely insanity. Hurtfully-directed moral causes are very efficient factors in disturbing the mind, both temporarily and often more seriously. The shocks or fright of overwhelming dread, are powerful for harm, even in perfectly healthy children. Religious teachings, of a lurid, hyperbolic nature, act as a lever by which much harm is

wrought. Superstition is another potent factor that will frequently dethrone unstable minds. Acute disease is a fertile source of harm; a scarlet fever, or typhoid, especially if accompanied by hyperpyrexia, very often reduces a perfectly normal child to an imbecile or maniac. A brutal, drunken man causing terror and woe to young children, as example, is almost as powerful for harm as ancestral traits.

Children subjected to long periods of want and exposure are certain to fail of right development, and to leave some stain in the moral sense, if not in mental acuity. Hence, the waifs and strays gathered up by the municipality, or by philanthropic societies, are of questionable mentality and demand care in implanting seeds of morality and right conduct. These must receive a more primitive form of instruction than others who have enjoyed a better start in life. The fundamental concepts, or ideas, being at fault, too advanced instruction only confuses.

"Mental Defects," or "Insane Disorders," are to include not only insanity, but that admixture of insanity and hysteria which are often indistinguishably blended. Nor must hysteria, in the larger significance of the term, be excluded. It offers all the superficial appearances, but is wanting in the testamentary findings. The similarity has especially to do with the phenomena of onset, and while preeminently an imitation, it is not all, or nearly all simulation. In children it is rarely suspected, but always possible as soon as the receptive faculties and power to form concepts are fairly established. The distinction between these two closely-resembling conditions is oft times a purely relative matter, to be decided partly by the personal factor of the observer, or the social or individual standard of the patient. Again, hysteria and organic brain disease may coexist—often *not* in the child, 'tis true—but will then prove most puzzling. A large familiarity with the hysterical states increases one's respect for the difficulties of differential diagnosis from insane disorders. The collateral evidence must guide the physician in making up his mind.

Hysteria in children must have some sort of an audience, always, and when vanity can be detected or gravely suspected, it will help to determine the nature of the attack. The instinct of the physician is always a help, but must not be marked by prejudice. No one has better formulated the principles of heredity in relation to insanity than Mercier, who points out besides the direct transmission of an unstable nervous system, another

law of heredity known as the law of sanguinity. Two persons may be perfectly healthy, and yet their children all be insane or idiotic. However, the child tends to inherit attributes of both parents, but it may inherit the qualities of one parent, in one respect, or of the other parent in the other respect. Or, it may inherit the father's attributes, for one period of existence, and the mother's for another. Attributes may be transmitted in latent form, from one generation to another, to appear in the third or fourth, or even more remote generations, phenomena called reversion. Mental defects tend to appear in the progeny at about the same time in life that they became manifest in the parent. Peculiarities of the father tend to be inherited by the sons, and those of the mother, by the daughters. The perfect organization of the progeny is the result of three factors, viz.: the quality of the germ, which brings matter, the quality of the sperm, which brings force, and suitability of one for the other. A study of the above laws will explain many of the puzzling features of "Psychopathic Heredity," and why? For instance, only a few of the children of a neurotic parent suffer from nervous troubles, and why may degeneracy develop in the progeny of healthy parents? It must be remembered, too, that there is a great difference in hereditary taint and its equivalents. One may be simply neurasthenia, or eccentricities of character, while the other may be of a much more serious nature, such as epilepsy, chorea, alcoholism, paranoia, or imbecility.

The taint in a family is greater the larger the number of the children affected. For instance, drunkenness in one generation may lead to a simple nervous condition in the next, to a complex degenerative psychosis, epilepsy, etc., in the third, and finally, in the fourth, idiocy, sterility and a complete annihilation of the stock.

I think we are living in an age of progressive hereditary degeneracy. Much study has of late years been devoted to these forms of insanity, or mental defects of childhood, and it behooves all of us who have anything to do with the development of the child, to familiarize ourselves with these signs of degeneracy, in so far as they concern our own special line of work.

I spoke of the two great causes of "Mental Defects" being heredity, and strain. It is heredity which renders the nervous system unstable, and the strain which causes the collapse. Doubtless there are limits of endurance in any organization, no matter how strongly balanced, if the strain

be great enough. The strain may be physical or mental—often both. What delicate mind could withstand the assault of all these factors, heredity, physical ill health, and improper care? It is difficult to estimate accurately the proportion of one cause as compared with another, since several are usually associated in the same case. That surprising condition known as precocity, which we regard as accidental, because we do not know how to explain it, is a source of peril, if not an absolute evidence of mental unsoundness. It is almost never a ground for parental gratulation, and frequently fulfills youthful promise. Not only that, but it predestines its possessor to an incurable neurosis. "They are the flowers doomed to blast unseen."

There was once an expert mathematician in our own state university, who was simply a marvel in his line. He could add, with perfect ease and accuracy, the numbers on a string of box cars running at the rate of forty miles an hour. He was known for miles around as the "Mathematical Wonder." He died, when less than twenty years of age, in an epileptic fit. We find that when these children are so well developed in one particular thing they are almost invariably very shallow in every other respect.

You may flatter your pride by forcing your child to know more than other children, but you are making a sacrifice of that child. You think that you are adding to its intelligence, but you are subtracting from its future. To know how best to deal with these conditions, without a clear decision, as to whether one has to deal with an eradicable vice, or a removable disorder, is a matter of vast importance. A great many of these cases are at the mercy of the "Family Doctor," and upon him rests the great responsibility of their early physical and moral training.

In speaking of the treatment of these "Insane Disorders," or "Mental Defects," if you prefer to so call them, a great deal can be said. I would urge, however, that such means be adopted as will act along the lines of prevention, rather than any therapeutic or disciplinary measures. Prevention is paramount to cure. As like begets like, the nervous system bows to the laws of all life—the law of heredity, the law that governed your birth, and mine, and laid a heavy hand upon some of us, that will endure even to the third and fourth generation. Next to the omnipresent, inevitable law of inheritance, comes the never-ceasing power of environment. This law begins at birth, and closes with the end of life; but

childhood and youth are the plastic stages in which the future of the child is moulded. "As the twig is bent, so is the tree inclined." We must cultivate the body of the growing child; develop him physically, by careful and regular diet, regular hours of sleep, outdoor life, and an efficient system of exercises. Let his training be muscular, rather than intellectual; manual training, rather than lessons, especially in the earlier stages of childhood. No school until the age of seven or eight years. Seek to develop the resisting power of the organism to all external stimuli, and accustom his mind to the courageous endurance of pain and mental stress. A child who is made to have hard muscles, strong lungs, vigorous digestion, and can bear changes in temperature, is almost sure never to become a nervous wreck, but will associate himself with the higher ideals of human life. There are two great errors in the early training of children that present themselves to my mind, viz.: first, by leading the child into duties beyond its years; and, second, by bringing up the child under what is called centripetal development, or development centering in self. That creates a feeling of importance that is never overcome by the child. Another grave mistake, that is made, is the lurid teaching of fear. It paralyzes judgment, ambition, and higher emotions.

Let them work. Let them labor with their hands. Many an invalid, many a neurasthenic, and many a hysterical man or woman would be stable and strong if they would but work instead of worry; if they could but realize that the growth of any living tissue was attained by alternating activity and repose.

Guard well the epoch of puberty, and if you succeed in passing this period, in either sex, without any outward sign of insanity, you have accomplished a great deal. But, listen! There is a greater responsibility, and a greater prophylactic measure to be taken than the training of the child. It is the prevention of intermarriages of criminals, drunkards, epileptics, consumptives, syphilitics, feeble-minded degenerates, and blood relation. I hope the time is not far distant when every state will pass laws pertaining to the legality of marriages, of the above-named classes; a medical council should be appointed in every county to examine every applicant, and to pass on the issuance of every marriage license.

Another law that should be passed, and enforced, is the one advocating the sterilization of criminals of a certain class. It would put an end

to some of their vicious habits and place them on a higher plane of life. Some of our profession are too conservative in their views to undertake so radical a remedy, but I can see no objection to operative procedure in such cases. Vasectomy, or, possibly, section of some branch of the pudic nerve, might serve as well, and while it does not impair the sexual powers, fulfills every requirement for sterilizing males, and should be provided for by law.

I think that if the above suggestions are carried out they will be the most sure prevention of "Mental Defects" of childhood, either from heredity or environment, that I can conceive of that will have any noticeable effect on the future generations of our race. It has been suggested that all the degenerates be put under state control, where they can be taken care of humanely, safely, and at a minimum cost.

When all these things have been done, and when the family doctor does his duty toward the family, by warning the parents and prospective parents of the dangers accompanying the mental development of their future posterity, and its moral training, we will soon see and realize a great change. We will feel that we have done our best for humanity, because men are but children of a larger growth, and "Childhood shows the man as morning shows the day."

The tissues of their life, to be,
We weave with colors all our own.
And, in the field of destiny
They reap, as we have sown.

THE SECRETARY OF THE COUNTY MEDICAL SOCIETY

HIS DUTIES AND HOW HE CAN BUILD UP HIS
SOCIETY

C. NORMAN HOWARD, M.D.

Secretary Kosciusko County Medical Society
WARSAW, IND.

First, catch your secretary. And in catching, catch a man who has all the virtues and none of the vices. A man who hears no evil; sees no evil; speaks no evil. Let him be a saint with a surplus of energy. Should all such have escaped, then the society will have to take a plain member—just an ordinary doctor; who, perhaps, may have a feeling of kindness toward his neighbors, even as you and I.

Probably one of the first things the secretary has to consider is the annihilation of loose ends. The organization must be compact. It must be solid. The doctors and laymen throughout the

county must know of the society definitely and not vaguely. They must come to understand that it is synonymous with all that is best in the profession. When an organization is simply a name, when no one accepts responsibility, then it is soft and mushy. Then you can run a stick through it anywhere and strike nothing. If, however, it can be made into a compact, working, clean-cut organization old members will want to stay and new men will want to come in. For please remember, gentlemen, that what will keep an old member in is just exactly what will induce a new one to join.

The organization can be made more compact by the secretary knowing the status of every doctor in the county. He can have this record in a book, keeping it up to date as changes come. He should answer all letters on the day they are received or the next day at latest. It helps a great deal to carry the effect of the society being alive if these answers are typewritten on attractive paper bearing the letterhead of the society and enclosed in a society envelope. Printed postal cards mailed regularly four days before each monthly meeting remind the busy men throughout the county and give them time to arrange their work. Sometimes add personal comment in your own handwriting. Whenever necessary individual doctors can be called up by long distance telephone. When some special speaker arrives a list of all the members can be turned over to central and telephone messages sent broadcast throughout the county. It does not cost so much as you might think.

The programs should be printed and let there be plenty of them. As the spirit moves him, the secretary can occasionally get out a circular letter, sending one to each physician, telling him how the society is getting along, asking his opinion, etc., etc. Let me say at this point, that while I consider the secretary should do all the headwork of which he is capable, he should not be expected to do a great deal of purely clerical work when it comes in lumps. When he thinks best he can call in an obliging stenographer and typewriter from a neighboring office, and charge the bill to the society. The expense of all these things, and other things which some of you are doing, is comparatively small. If there is not enough money the dues can be raised. The raising of dues does not necessarily result in a riot, for in fact, my observation leads me to believe that men will more gladly pay a reasonable amount for something which appeals to them than a very small amount for practically nothing at all.

If the secretary gives a short account of each meeting to the local newspapers it will help famil-

iarize the laity with the society; it will be an additional reminder to those members who did not attend, and it will make those who are not members feel that something "is doing." Adjectives were better omitted from this news account, simply the fact of the meeting, subjects and names of the essayists being given and perhaps the names of the members present, with any general remarks about the society as a whole that might be illuminating. From time to time the secretary could also give little additional items in regard to district, state, and national meetings, the extent of membership, etc. He should also make a regular report to our *State Journal*. These reports should be made as interesting as possible by giving the gist of each number of the program. Tear the meat out of each man's talk, concentrating perhaps a five minutes' discussion into three sentences. This is not such bad mental gymnastics for the secretary, either. If each essayist would prepare a resumé of his paper it could be sent into the *Journal*. This, I believe, is also the wish of Dr. Bulson, who takes care of us in these matters.

What shall be done to induce non-members to join? Suppose Dr. Stay Out down there in the southwest corner of the county, old Dr. Grudge ten miles east, Dr. Sour close at home and Dr. Never Comein have not as yet unlimbered. You suggest, write each one a letter? Yes, do that and say in that letter that practically all the other good men in the county have joined, that there are probably no physicians of state or national prominence who are not members of their local organizations, that the society wants him and that he will in all probability find out he wants the society. By the same mail a request can go out to the editor of the *State Journal*, asking that another sanptry copy be sent to our friend. Perhaps we might wait now until it comes near time for the next meeting and then write again, enclosing application blank and program, and say just whatever you feel like saying to each one. By that I mean each secretary should throw his own personality into his letters. They may not amount to much as letters but they will pull more because there is a human element back of them. Then, after awhile, you can figure out with what member he is on particularly good terms and perhaps press that member into service.

If the old members as well as the prospective ones can be made to feel that they are wanted, much has been gained. Not wanted in a perfunctory way but in an earnest, frank, enthusiastic, "come in and make yourself at home" way. We must remember that it is not satisfactory to

any one to feel that his comings and goings are a negative factor to others. Therefore, another duty of the secretary should be to make all reputable physicians in the county feel that the society is glad when they come and misses them when they stay away. This attitude is not an artificial one, either, because the life of any society depends on the attendance. There is inspiration in numbers.

Unless the society is blessed with an energetic program committee such as we have at home, the secretary would better write to each essayist two weeks before the meeting, calling attention to the labor ahead of him and asking, should he foresee its nonfulfillment, that he notify the secretary at once, so that the space will not be empty. For, as you know, gentlemen, men will not continue to travel several miles to find each time a depleted program.

Some of these suggestions may not be applicable to all of our county societies; but I trust that in the discussion those of you with wider experience will add to and develop this partial list of duties, and methods of upbuilding, so that this day may be one of distinct profit to all.

But I must not omit the last duty of a tactful secretary. He must be ready to retire gracefully at any moment for the good of the cause. You know, that when Miss Watson talked to Huck Finn for a while about hell he finally said he wished he was there. You remember she was shocked beyond measure but Huck said: "I didn't mean no harm; all I wanted was a change; I warn't particular." And so the county society might mean no harm but just want a change.

Finally, the secretary should school himself to feel friendly toward all; looking ever for the sunlight, for the wholesome things; remembering that no man is perfect. Should he forget this he has but to look in the mirror. This feeling of good will, this belief in his fellows, should run through all his official relations with them. If the sheep is so black that it cannot enter the fold, then hope for the day of its purification. If there is enough of the white to squeeze a new member in, then play the white for all it is worth, and perhaps bye and bye all the black will be gone.

You say these things are basic? That they dip down into man's relation with man? You are right. But why not? For how else shall you and I boost along this new idea we hear so much about? How else shall we begin to learn this latest lesson that evolution is pressing upon the world—this Brotherhood of Man?

THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

THE FORT WAYNE SESSION

The expectation that the Fort Wayne session of the Indiana State Medical Association would far surpass all previous ones in attendance was more than realized, as is shown by a glance at the registration list published in this issue of *THE JOURNAL*. With an attendance of over four hundred and fifty members and about a hundred visiting ladies, the prediction that the total attendance would reach a figure between five and six hundred is fulfilled. The advisability of registration by membership card was demonstrated at the registration desk where, in spite of the watchful eyes of the clerks and censors, a few irregulars managed to slip their names on the register. Had registration by membership card only been permitted, this disagreeable feature could have been readily eliminated, and it should be so eliminated at future meetings.

As a whole the program proved to be a most interesting and excellent one and those in charge of it have cause to congratulate themselves in the segregation and selection of those papers that were allowed a place on the program. The time has come in the history of our rapidly growing association when it becomes a folly to expect that every paper that has been referred by a county or district society, however good it may be, can find room on the program for the annual state session of but two days' duration. So that the advisability of having a committee of competent and impartial men go over the long list and select those that seem most opportune and possess greatest merit should not be questioned. No member should feel piqued because a paper of his has been referred and yet not given a place on the program, for we all realize that the most good can come from a fewer number of papers and a more thorough discussion of each.

The same criticism should be made that held for previous sessions, concerning the absence from the session of those occupying places on the program. We all should appreciate that under

the present régime, the place on the program afforded one man means the exclusion of several, and to default for a trifling cause means not only a gross breach of etiquette to the society but a moral wrong to those who have been displaced upon the program by the defaulter. No legitimate excuse for such breach can obtain save that due to serious illness or death in one's own family, in which event one's paper should, of course, be forwarded to the secretary, to be read by another than the author, if the society so desires. It seems strange indeed that the honor of a place upon the state program is occasionally so little appreciated that a man will attach such slight obligation to it. It might prove rather effectual for the secretary to retain a list of those members who inexcusably defaulted from the program in order that future audiences might with propriety be denied such ones by the program committee. This procedure would certainly be but fair to those who really appreciate their opportunities and gladly meet their obligations to the society.

The superiority of general meetings over sectional ones was pretty well demonstrated at this session. It permits of a more varied program and allows a man to hear all the papers rather than have to miss one or more good papers in order to listen to some one in which he is particularly interested.

Again we have had an example of the folly of having the hours of meeting of the House of Delegates conflict with those of the general meetings. Delegates are not sent with the idea of merely attending the business meetings of the House of Delegates, but each to represent the community from which he is sent, and report back to his constituents, who may not have attended the session, whatever new and progressive thoughts have been brought forth. It is obviously unfair, also, that the society should be deprived of its president during its sessions, in order that he be present at the various meetings of the House of Delegates. Unless some change is made whereby the delegates can attend the business meetings and yet not be robbed of the benefit of the general meetings, the time will come when good, conscientious men who attend the state association sessions for the good to be derived therefrom, will absolutely refuse to serve as delegates, and that body will come to be made up of medical politicians, pure and simple—a most deplorable condition.

Unfortunately, so much matter had to come before the House of Delegates that the third and last meeting had to be prolonged from 8:30 to 12:30 Friday morning. This, again, is obviously

unfair, for the delegates were thus deprived of attendance upon the whole of the morning scientific program. It would seem that the work of the House of Delegates might be greatly condensed by several means; such, for instance, as by publishing in *THE JOURNAL*, in advance, the reports of the several standing committees so that the time of the body of delegates would not be consumed by the reading of these lengthy reports; and, again, by referring more questions to committees appointed for working out the details of such questions and presenting a condensed report to the House of Delegates for final action. Such committees could arrange their meetings for intervals when the House of Delegates was not in session and thereby greatly facilitate the work of the latter body.

The president's address to the House of Delegates contained several valuable suggestions which were embodied in resolutions framed and introduced by the committee appointed to consider the president's message. These resolutions were passed, and provided among other things that the Committee on Scientific Work be permitted to make its own selection of papers for the annual session independently of whether such papers had been previously read before and referred by county or district societies. This will permit of a little broader selection of papers and will allow of more symposia on important subjects.

Another wise change in the by-laws provides that the vice-presidents of the Association may be broadly chosen from the general membership without regard as to whether they happen to be presidents of district societies.

An innovation was introduced in the House of Delegates this year in the form of a resolution, which was unanimously passed, increasing the dues to two dollars per year in order that medicolegal defense may be furnished members of the Association. A committee was appointed to consider the matter and made a preliminary report in favor of the proposition but suggesting the advisability of delaying definite procedures for another year. The dues were, however, raised to two dollars, and as such will begin Jan. 1, 1911. Medical defense against malpractice suits has been tried by other state societies and has proved very satisfactory so far, and he would be niggardly indeed who would object to his state dues being raised to two dollars per year when he was at the same time enjoying legitimate medical protection which alone, at present, costs him from ten to fifteen dollars per year.

The very creditable stand of the Indiana State Board of Health in the pursuit of the pure food campaign was given official commendation.

The affairs and condition of *THE JOURNAL* were carefully reviewed and a unanimous vote of thanks and expression of confidence was kindly extended the editor.

The action of Dr. Smelzer, a member of the State Board of Medical Registration and Examination, in attempting to keep down the standard of medical education in Indiana for the expressed purpose of getting more fees was justly condemned after that gentleman had been allowed a personal hearing; and the Council was authorized to select a representative member of the State Association and present his name to Governor Marshall as a legitimate successor to Dr. Smelzer.

The election of officers concluded the last meeting of the House of Delegates and resulted in the Association honoring itself by electing to its presidency a man of state-wide prominence and sterling worth, Dr. F. C. Heath; a meager but just tribute to the long and faithful service rendered to the society by Dr. Heath as its secretary.

Too much credit for the success of the Fort Wayne session cannot be given to the committee on arrangements, for they worked hard and justly merit the hearty thanks of the Association, as do the members of the Fort Wayne Medical Society for the generous hospitality extended all visiting members.

The selection of Indianapolis as the place for the 1911 session met with the general approval of all delegates, and with such a central location, easily accessible from all points of the state, and abundant facilities for the proper care of the Association, the next session ought to be one of unusual excellence from every point of view.

THE GOVERNOR'S APPOINTMENTS ON THE MEDICAL BOARD

The members of the Indiana State Medical Association have no desire to dictate to Governor Marshall as to whom he shall appoint as members of the State Board of Medical Registration and Examination, but they feel that inasmuch as they were in a large measure responsible for the medical law which creates the present Board of Medical Registration and Examination, and are interested solely in the efficiency of the law and the work of the Board for the benefit of the public at large, the Governor ought to respect

the wishes of the members concerning qualifications in making appointments to represent them.

Since the enactment of the present medical law, the Regular medical profession has been entitled to two representatives on the Board. The Indiana State Medical Association, the representative body of the Regular medical profession in Indiana, has repeatedly recommended educated and competent men for appointment to represent it on the Board. With the exception of the appointment of Dr. Webster, of Lafayette, who has since been removed from the Board, the Regular medical profession has never had an accredited representative on the Board since it was created. At the present time there are two members on the Board who are supposed to represent the Regular medical profession. Dr. Dinnen, of Fort Wayne, was appointed and has been re-appointed for political reasons, and while he has not been particularly objectionable to the Regular medical profession, he has not received the recommendation and endorsement of the profession. Dr. Smelzer, a recent appointee to the Board, is supposed to represent the Regular medical profession on the Board, but he also has failed to receive the endorsement of the profession and, on the other hand, is positively objectionable as evidenced by the charges brought to the attention of the Governor in asking for the removal of Dr. Smelzer, and Dr. Smelzer's lame attempt to defend himself when such charges were presented at the recent session of the Indiana State Medical Association for the official action of the Association.

The opposition of the medical profession to Dr. Smelzer as a representative of the Regular medical profession upon the State Board of Medical Registration and Examination is based on the grounds of incompetency, lack of education, record of failure to pass the Board himself, and his alliance with the Osteopathic member of the Board to keep down the standard so that more fees will come to the Board. At the Fort Wayne session of the Association these charges came up for discussion before the House of Delegates, and Dr. Smelzer was given an opportunity to defend himself. He succeeded in producing the best possible evidence as to the truth of the charges, and the Association placed itself on record as opposed to his further retention on the Board, and passed a resolution respectfully requesting the Governor to appoint some one else who shall have the recommendation and endorsement of the Association.

Concerning the removal of members of the Board, the law says: "The Governor shall have

power to remove any member of said Board for incompetency, gross immorality, for any abuse of his official power, or for other good cause, and may fill any vacancy thus occasioned by appointment." In the interest of competency and efficiency of the Board, we hardly see how the Governor can ignore the charges filed, or refuse the request of the Association. On the other hand, the Governor owes it to himself to have the best possible appointees on the Board, and we might go a step further by saying that if he feels disposed to favor those who have favored him he cannot ignore the request of the Indiana State Medical Association, a majority of the members of which supported him for election to his present high position.

But this matter of appointing members to the Board should be free from politics, and had it been free from politics not only would the Board have been more efficient, but to-day the Indiana State Medical Association would have two representatives on the Board instead of none at all. The members of the Indiana State Medical Association do not care anything about the politics of the various appointees on the Board, but they are interested in the competency and efficiency of the men on the Board, and respectfully ask that the Governor do justice to his official position, to the Board, to the medical profession and to the people of the State, by appointing men as members of the Board who are qualified for the position, and who have the endorsement of the medical profession.

PREVENTIVE MEDICINE AS A SPECIALTY

It is greatly to be hoped that should the Owen bill become a law, the way may be opened for far greater strides in preventive medicine than have been obtained up to the present time, although wonderful progress in this line has already been made. How fortunate our citizens would be if a field so attractive should be thus opened: that well-educated and bright young men would see an opportunity of rendering a world service by directing their education toward this specific line of work for life! The country certainly stands in far greater need of trained sanitarians than more specialists in many of the branches that are now considerably overeroded.

A national school for the study of public health questions in all their phases, embracing thorough courses in municipal and sanitary engineering, architecture, applied chemistry,

etc., would be a most economical investment and one toward which every municipality could well afford to contribute in proportion to the benefits attainable to it therefrom. This school should be maintained as a postgraduate course for those medical graduates who desire to enter upon this specialty as a life work, and the law should provide that no public health officer should be given to any but such as have completed this course. Possibly the enactment of such a law might go far toward the elimination of much of the pot-house politics that seem to enthrall these offices today. A supply of competent men of this sort, combined with a more widespread effort at public education upon these questions, would soon result in a demand for the enactment of such legislation as seems at the present time impossible. Not only would more executive power be granted our public health officers, more funds be placed at their disposal, but the people would soon be demanding the enforcement of all existing health laws; vital statistics would be much more completely available and our registration areas would no longer be restricted to a few selected spots scattered throughout the country. The tenure of office of the keeper of the public health would no longer be dependent upon the degree of political favor enjoyed by him, but given a trained sanitarian with proper authority and sufficient backbone to enforce the law, the newly-educated public would stand back of him.

Furthermore, the field of candidates for the office would no longer be crowded with incompetent and untrained aspirants who looked upon the place merely as a means of adding a few dollars to their meager incomes, a temporary graft, obtainable only through political preferment without respect to the inherent qualifications of the man, and without regard for the future safety and dignity of the office. Likewise the people should and would be willing, as soon as they were properly informed upon the subject, to compensate their sanitarian to a degree that is commensurate with the importance of his trust—namely, the care of its health. Curiously enough the public as yet is not ready to admit that its health has the intrinsic value as an asset that its live stock enjoys and hence it is difficult to obtain from our legislative bodies a sum of money sufficient to suppress an epidemic of smallpox, when that same body would fairly fall over itself in an effort to stamp out hog cholera or Texas fever. Obviously there is much room for public education upon this point. But when that millenium of general information does come and the people arrive at a full appreciation of the economical

value of prophylaxis, it is to be hoped that every municipality will be more than glad to contribute its mite toward the maintenance of a national school for sanitary instruction. Entrance to this school could be by scholarship, which would greatly enhance the dignity of the calling for which the candidate sought preparation, and his community would probably take a certain peculiar interest in his training and his subsequent teachings.

Incidentally it may be remarked, as is noted in a recent editorial comment in the *Journal* of the A. M. A.,¹ that the conscience of the public is awakening on the subject of preventable disease. The *New York World* is quoted to the effect that every life lost by typhoid is a wasted life and the loss entirely preventable. In fact the strong declaration is made that typhoid originating in any community disgraces it. The time has long since passed when epidemics of typhoid and other filth diseases can be regarded as dispensations of Providence just as a high death-rate was looked upon as a natural ratio which was unalterable. Let us have live, energetic health officers who will not only enforce our laws concerning the reporting of infectious diseases, but will seek out the origin and source of infection, destroy them and prosecute all criminally negligent persons who are by their indolence jeopardizing the health and lives of their neighbors.

Give us a corps of trained and fearless men who are pursuing their work because their hearts are in it and because they appreciate its immense value to the people. And give them every right to seek out and exterminate, if possible, all preventable disease, throwing down for them the bars of privacy concerning the venereal plague and lending our influence toward the prosecution of all offenders against the public health.

HEMORRHAGE IN TONSIL OPERATIONS

The general consensus of opinion at the present time is that the tonsils are channels of pathogenic infection, and in view of the facility with which micro-organisms, especially of the pathogenic type, gain entrance into the system through the tonsils, it becomes necessary under certain conditions to remove the tonsils in their entirety.

One of the greatest objections to the removal of tonsils is the fear of hemorrhage, and judging from the repeated reports of serious and occasionally fatal hemorrhage following tonsil operations

1. *Journal of the A. M. A.*, Oct. 1, 1910, p. 1207.

it would seem that the fear is not unfounded. It may not be out of place, however, to call attention to the fact that severe hemorrhage is more likely to follow a tonsillotomy than a tonsillectomy, and for that reason, as also for the further reason that the results are far better, complete removal of the tonsils is preferable to partial removal.

A comprehensive knowledge of the anatomy of the tonsillar region and of the possible sources of hemorrhage will enable the operator to exclude largely the occurrence of hemorrhage in tonsil surgery. As stated by Ballenger¹ the most frequent site of arterial hemorrhage is at about the middle portion of the sinus tonsillaris where the tonsillar branch of the facial pierces the superior constrictor muscle of the pharynx. Other points of hemorrhage are usually limited to the inferior portion of the sinus tonsillaris, where the tonsillar venous plexus is located, and to the anterior and posterior pillars, which contain numerous large arterial branches. Therefore the operator should endeavor to keep close to the capsule of the tonsil in order to avoid the larger vessels, as also to avoid injuring the superior constrictor muscle and the pillars which contain arterial branches which, when severed, may produce annoying hemorrhage.

It is presumed that every operator inquires as to the existence of a hemorrhagic diathesis in a patient upon whom a tonsil operation is to be performed, and that operation upon a "bleeder" is to be avoided; but not infrequently severe hemorrhage occurs, either because due care is not observed in the avoidance of the larger vessels in the tonsillar region, or the smaller vessels severed in the classical operation show a tendency to bleed for an unusual length of time. In such cases the question arises as to the best means of controlling the hemorrhage. Styptics, such as iron, alum, tannin and zinc, are absolutely unreliable, and the same may be said of adrenalin. Peroxide of hydrogen or ice water used as a gargle act satisfactorily at times in slight bleeding, but have little or no effect on hemorrhage that is well established. The one method that is certain at all times and under all conditions is direct pressure. If the bleeding is not profuse it is generally easy to control it by pressing a pledget of gauze into the pocket from which the tonsil has been removed and maintaining the pressure for a few minutes. Occasionally the bleeding vessel can be seen and grasped with artery forceps and ligated, but such instances are exceptional, as the

flowing blood, clots and gagging of the patient prevent the exact localization of the bleeding point. If the hemorrhage is profuse the pressure must be maintained from three to twelve hours, and in such instances the tonsil clamp is indispensable, and the earlier it is applied the better. Hemorrhage which does not cease spontaneously within a few minutes following operation should be considered a surgical emergency and receive prompt attention, and the most effective attention is direct pressure. Failing to control the hemorrhage by pressure necessitates resort to ligation of the external carotid artery.

Finally, owing to the danger of hemorrhage, as well as sepsis, tonsillectomy should be considered a hospital operation, or at least an operation requiring similar attention to that afforded by a hospital. It is the height of folly to permit a patient upon whom a tonsillotomy or tonsillectomy has been performed to go from the operating room to his usual vocation or to engage in any pursuits. The patient should be kept quiet for two or three days, and sitting upright for several hours after the operation as least likely to favor hemorrhage. Long rides in carriage, automobile, steam or electric cars immediately after the operation should not be permitted, not only because the patient is taken beyond the easy reach of the surgeon, but because such practice is apt to induce secondary hemorrhage. There can be no objection to the performance of the operation in the surgeon's office if properly equipped, but the patient should not leave until the hemorrhage is under control, and then should be removed by carriage to home or hospital within easy reach of the surgeon. If removed to his home he should have, for at least twenty-four hours, the services of a trained nurse who has been taught how to apply digital pressure to control tonsillar hemorrhage, should it arise during the interim of the surgeon's arrival. In no other way is it possible to be reasonably safe that hemorrhage will not occur and reach an alarming state before properly recognized and given appropriate attention.

Many tonsil operations are performed and the patient allowed to leave the operating room with utter disregard of the possible danger of continued or secondary hemorrhage, and it is only when a serious hemorrhage occurs that the surgeon and patient are brought to a full realization of the importance of considering the removal of tonsils an operation worthy of as much immediate after care as any major operation. Every man who removes tonsils will sooner or later have cases of severe tonsillar hemorrhage if he

1. Diseases of the Nose, Throat and Ear, 1908.

adopts no precautions, and he may have such cases even with the utmost care, but he will do the most to prevent such occurrences, and do more justice to himself and his patients if he considers every tonsillectomy or tonsillotomy a major operation, and a possible source of trouble from hemorrhage, and manages it accordingly.

EDITORIAL NOTES

It is now President Heath.

PRESIDENT HEATH served the Association as secretary for many years, and it was a fitting recognition of his services to honor him with the presidency.

THE Fort Wayne session is now a matter of history, and generally considered makes a favorable chapter to the record of successful sessions of the Indiana State Medical Association.

MEMBERS of the Association were particularly favored by having beautiful weather during the Fort Wayne session. Had the session been held a week later the members would have encountered a cold rain which continued for several days.

THE selection of Indianapolis as the place for the 1911 session of the Association meets with general approval. The Association ought to meet at the capital city, the metropolis of the state, which is centrally located, at least once every three years.

By order of the Council a revised copy of the constitution and by-laws of the Association as amended at the Fort Wayne session will be sent to all officers of the Association and all county society officers as soon as obtained from the printers.

THE ladies who attended the Fort Wayne session were loud in their praise of the manner in which the wives of the doctors of Fort Wayne entertained the visiting ladies. Automobile drives, concerts, luncheons and teas were given in honor of the visitors, and the most cordial hospitality was exhibited on every hand.

THERE seems to be a general feeling in the Association that the evening meetings should be

abandoned, and the time devoted exclusively to social features. At any rate it has been conclusively demonstrated on numerous occasions that justice to a double program is out of the question. If we are to abandon anything let it be the evening scientific meeting, which is only an additional burden after a strenuous day of scientific work.

BEGINNING with Jan. 1, 1911, the dues to the Association will be \$2.00 per year. County society secretaries who are in the habit of collecting dues in the Fall should remember that the dues have been increased and collect \$2.00 for 1911. It should also be remembered that the dues are payable on or before January 1 and become delinquent on February 1. In collecting the increased dues members should be reminded that the increase goes to make up a deficiency in the State Association treasury, and also to create a fund for medical defense in malpractice suits brought against any member of the Association.

THE meeting of county society officers at the Fort Wayne session was largely attended and of distinct value to the organization movement. Most of the addresses were made without notes but they covered in a comprehensive and interesting way some of the subjects that are of particular interest to those who are serving as officers of county societies. The paper of Dr. C. Norman Howard, secretary of the Kosciusko County Medical Society, was particularly helpful, and the paper appears in full in this number of THE JOURNAL. It should be read by every county society secretary.

THE Association at the Fort Wayne session made provisions for a campaign of education concerning preventable blindness, and arranged for the appointment of a committee for the purpose. The Committee on Preventable Blindness as appointed is as follows: George F. Keiper, Lafayette, chairman; Albert E. Bulson, Jr., Fort Wayne; John N. Hurty, Indianapolis; Thomas B. Eastman, Indianapolis; Professor Severance Burrage, Lafayette, and F. C. Heath, Indianapolis, ex-officio. It is expected that this committee will advocate the enactment of laws tending to limit the production of blindness by industrial accidents, ophthalmia neonatorum, etc.

THE president of the Michigan State Medical Society, in welcoming the Mississippi Valley

Medical Association to Detroit, said that Michigan and Indiana used to be the dumping ground for all the quacks and incompetent doctors, but that Michigan had turned over a new leaf and is now one of the few states where the medical requirements are sufficient to keep out the quacks. He might have said that Indiana has also turned over a new leaf, and it is very hard for any kind of an ethical and educated physician to get a license to practice medicine in Indiana, but the quack still flourishes and somehow or other he happens to get into the State from the outside whether we want him or not.

THE House of Delegates very wisely left the selection of papers for the program of the annual sessions of the Association to the scientific or program committee, though the county societies will refer all papers except those especially solicited by the scientific committee. To accept every paper offered would result in a program of too great length, and one not altogether meritorious, for it is a well-known fact that county societies sometimes refer very unworthy papers for a place on the Association program. This does not always occur through a lack of knowledge as to what constitutes a good paper, but rather through a desire not to offend some aspiring member who has asked that his poorly prepared contribution be referred.

THE Secretary of the Vigo County Medical Society informs us that his society subscribed \$5.00 to the N. S. Davis Memorial Fund, and that our editorial note in the September number of *THE JOURNAL*, wherein we stated that Indiana had made no contribution to the fund, is untrue. In explanation we have to say that we obtained our information from the published report of the treasurer of the Davis Memorial Fund, and we took it for granted that such report was true when it did not include Indiana among the contributors to the fund. Is it possible that the donation from the Vigo County Medical Society did not reach the treasurer of the fund? The matter is worthy of some investigation.

THE Department of Public Health of the City of Fort Wayne has issued the following notice concerning anterior poliomyelitis:

DEAR DOCTOR:

You are hereby notified that pursuant to a resolution passed by the Board of Health on October 3, every physician must hereafter report each and every case

of acute anterior poliomyelitis which comes under his notice.

Due to the infections and contagious character of this disease, and to the disastrous epidemic caused by that occurring in different parts of the country, prompt quarantine will be established and conducted with the same precaution that we try to guard against diphtheria, scarlet fever and small-pox. Quarantine will be kept in force at least 21 days.

Sincerely,

FORT WAYNE BOARD OF HEALTH,

PER E. A. CRULL, *Secretary*.

It is unfortunate that Prof. Barton Cooke Hirst, the honored guest at the Fort Wayne session, did not feel that time permitted the delivery of such an address as had been expected of him. Through some misunderstanding it became necessary to place two additional addresses on the evening program, and when it came time for the address of Professor Hirst it was time for the social features of the evening, a fact which Professor Hirst very courteously took into consideration, and in consequence the address was restricted to a very short extemporaneous talk. However, we sincerely hope that the complete address as prepared for the occasion will be procured from Professor Hirst and printed in an early number of *THE JOURNAL*.

THE coming winter will see another session of the state legislature. There is much legislation needed in which the medical profession is vitally interested, and if we are not mistaken there will be some legislation proposed which is antagonistic to physicians and to medical practice. It would seem, therefore, that doctors should take a hand in politics in their own interest, and the time to do the most effective work is before the election. We regret that it is too late to publish the names of candidates for the legislature who are known to be antagonistic to the medical profession, but it may be that we will accomplish something by calling attention to the necessity of investigating the record and present attitude of all candidates, as far as their opposition to the medical profession is concerned, before making a decision as to how to vote.

PERHAPS a majority of the members of the Association, if they had their choice, would prefer general scientific meetings rather than meetings by sections. However, it should be remembered that with a two days' session the program will of necessity have to be limited to less than 25 papers if the scientific work is to

be done in general meetings only. If a large number of excellent papers are offered the committee, and out of that number a great many are devoted to special subjects, it would seem better to divide the work between two sections, a surgical and a medical section, thus permitting all of the papers to be presented and thoroughly discussed. This matter has been left in the hands of the scientific or program committee with power to act, and whatever policy is adopted will undoubtedly meet with the approval of the majority of the members of the Association.

THE typhoid season is here, and in several localities in Indiana typhoid fever exists in a sufficiently large number of cases to be quite alarming. It is always interesting to trace the source of infection, but seldom does the information acquired prove to be beneficial to the people, who are oftentimes left in ignorance as to the manner in which typhoid is contracted and what precautions must be observed to avoid having the disease. We have been informed that in one small town there have already occurred nearly thirty cases of typhoid, and as yet the inhabitants are unaware of the fact that the disease is acquired through infected water or food and the source of the infection can be discovered and further spread of the disease checked by proper preventive measures. Truly the physicians have a duty to perform, and that duty consists in letting the people know that typhoid is usually a water-borne disease, and that to stamp out the disease means discovering and cutting off the infected water supply.

THE legislative committee of the Vigo County Medical Society has commenced its work with the candidates for political office, and as Dr. J. D. Foor is a candidate for re-election as representative from Vigo county, the committee is preparing a letter to send to each physician in the county quoting the promise made by Dr. Foor to the medical profession two years ago, and citing his record in the legislature where he openly opposed all the measures advocated by the medical profession. The members of the Vigo County Medical Society propose to make an example of Dr. Foor, and let candidates know that when a pledge is made to medical men in return for their support it is expected that the pledge will be fulfilled.

We earnestly urge medical men all over the state to adopt some such course as that being

carried out by the Vigo County Medical Society. The medical profession has never asked for any legislation which was not in the best interests of the public at large, and too often they have been promised support by various candidates for office and later the pledges were not fulfilled. It is entirely proper to ask the candidates how they stand on questions of interest to the medical profession, such as respectable appropriations for the medical department of the University, for the Board of Health, for the establishment of a tuberculosis hospital, a hospital for the treatment of inebriates, etc. No candidate should be asked anything which is unreasonable, but he ought to be willing to pledge himself to vote for the objects approved by the medical profession if he expects to receive the support of medical men, and if at the next session of the Indiana State Legislature candidates who make such pledges fail to live up to the pledges, such candidates should be held up as an example of perfidy and publicly branded as unworthy of the confidence of voters who uphold integrity as one of the essentials in those holding offices of public trust.

AN agent for a well-known pharmaceutical manufacturing house informs us that fully 50 per cent. of the physicians who dispense their own medicines buy only the cheapest and most inferior drugs and chemicals. If this statement is correct then the physicians who look to price rather than quality when purchasing their supplies are deserving of the severest censure. Drugs and chemicals cannot be too good for use in treating diseased conditions, or even in carrying out laboratory work, and the manufacturers of drugs and chemicals of the highest quality are sufficiently plentiful, and competition makes the price sufficiently reasonable to warrant the statement that no honest doctor has any excuse for patronizing the many manufacturers of inferior goods who bid for business because of the price but who make the purchaser pay dearly because of a sacrifice of quality. There are a great many so-called physicians' supply houses and with few exceptions such houses are the worst offenders when it comes to a question of quality. Usually they do a manufacturing business themselves on a small scale, and with inadequate facilities, a comparatively greater expense to carry on the manufacturing business, and a natural desire to make the most profit, the result is a reduction in quality. No physician should be deceived by the specious arguments put forth by the maker of cheap and inferior goods. The most reliable

houses today are some of the largest and best-known houses, and they are not only making goods of the highest quality, and have to make such in order to sustain their reputations, but they are also making the goods as cheap as they can be made consistent with a fair profit, and cheaper than it is possible for the same goods to be made by the houses of limited capital, poor equipment and inexperience. If the physician is going to supply his own drugs then let his motto be "not how cheap but how good."

DEATHS

DR. U. A. AGER died at his home in Peru September 7, of heart disease. He was a native of Starke county, Ohio, but had lived in Indiana for sixty-three years. He graduated from Rush and Bellevue Medical Colleges.

DR. G. W. SHEPHERD, one of the oldest practitioners in the eastern part of the state, an old veteran, and a member of the board of pension examiners, died following an attack of apoplexy September 26. Dr. Shepherd was born in 1840.

DR. JOHN W. FAUCHER, Indiana Medical College, Indianapolis, 1876, surgeon in the army during the Civil War and stationed at the General Hospital, Nashville, Tenn., died at his home in Sheridan, Ind., August 19, from gastroenteritis, aged 71.

DR. ALBERT W. SHOUP, of Battle Ground, died September 12 in the St. Elizabeth Hospital, Lafayette, of inflammation of the liver. Dr. Shoup was fifty-two years of age. Dr. Shoup graduated from the school of Pharmacy of Purdue University in 1887, and from the Louisville Medical College in 1894.

DR. JARED SPOONER, a prominent physician and surgeon of Peru, died at his home September 26, following a long illness from multiple neuritis, at the age of sixty-four years. Dr. Spooner was born in Noble county, Indiana, in 1846, and graduated from the University of Michigan in 1871. In 1860 he enlisted in the Civil War, being a member of Company D, Twenty-ninth Indiana. In 1890 he graduated from the University of Pennsylvania, and at various times later took special postgraduate courses in some of the noted universities.

DR. P. H. JAMESON died at his home in Indianapolis October 7, the immediate cause of his death being jaundice. He had given up the practice of medicine for the last four years, but every morning went to his office in the Newton Claypool building, where he gave attention to his affairs and occasionally prescribed for old-time patients. He was born in Jefferson county, Indiana, April 18, 1824. Dr. Jameson was reared to the age of nineteen years in Jefferson county, there receiving his early education; and coming to Indianapolis in 1843. Dr. Jameson took his first course of lectures in the medical department of the University of Louisville. In March, 1849, he graduated from Jefferson Medical College, Philadelphia, and at once began practice. He was a charter member of the Indiana State Medical Association, organized in 1849, of which he and Dr. William H. Wishard were the last surviving members. During the Civil War he had medical charge of the unmorganized troops in the Indianapolis military post. From 1861 to 1869 he was physician for the Indiana Institute for the Deaf and Dumb, and from 1869 to 1879 he was president of the state benevolent institutions, then comprising the Indiana Hospital for the Insane, the Institute for the Deaf and Dumb, and the institute for the Blind. For forty years he had been a member of the board of rectors of Butler College. In 1876 he wrote for the newspapers of Indianapolis a series of articles against high taxation and extravagant expenditure of money in the affairs of the city. The Bobbs Free Dispensary was the practical exhibition of his charity and philanthropy.

NEWS, NOTES AND COMMENTS

DR. C. H. WRIGHT, of Yorktown, is spending a six weeks' vacation on the Pacific coast.

DR. CLAUDE LENOX, Tell City, has gone to the Island of Molokai to make a clinical study of leprosy.

DR. JOHN E. MCARDLE and Miss Henrietta Grimme, both of Fort Wayne, were united in marriage September 6.

THE Fifth Annual meeting of the Second Councilor District Medical Society was held at Trinity Springs Tuesday, August 23.

DR. L. D. ELEY, of Plymouth, County Health Commissioner of Marshall county, sustained a broken wrist while cranking his automobile October 7.

THE August meeting of the Clinton County Medical Society was held in the office of Dr. Elwood Robison, Rossville. Thursday evening, August 4.

DR. B. D. MYERS, professor of anatomy in the Indiana University, who has been doing post-graduate work in Europe for the last six months, writes that he will return home late in December.

DR. E. S. WAYMIRE, a member of the house staff of the Methodist Episcopal Hospital, has been appointed house surgeon of the Wabash Railroad Hospital, Peru.

THE regular monthly meetings of the Delaware County Medical Society were resumed the first Thursday in October, following the usual summer vacation during June, July, August and September.

THE postoffice department is said to have entered a fraud order against Dr. Jacob W. Coblenz and the Compound Oxygen Company, Fort Wayne, who are alleged to have been exploiting a mixture called "Compound Oxygen."

THE State Board of Health is about to establish a bureau of speakers on health. These speakers will accompany the tuberculosis exhibits which are to be sent to school houses, and will speak to the school children on how to live and how to prevent disease. The lectures will be illustrated, and photographs of correct living and sleeping apartments and other methods of sanitation will be shown.

SOME of the prominent medical organizations of the country have recently honored Indiana men. Dr. Edwin Walker, of Evansville, is the retiring president of the Mississippi Valley Medical Association; Dr. John J. Kyle, of Indianapolis, has just been elected president of the American Academy of Ophthalmology and Oto-Laryngology, and Dr. C. E. Barnett, of Fort Wayne, has been recently elected second vice-president of the Mississippi Valley Medical Association.

A HEALTH car caravan is being organized in Indianapolis by the father of a tuberculous child. The caravan will contain twelve vans and two automobiles with accommodation for from forty to fifty patients, suffering from tuberculosis. Nurses, cooks and a physician are to accompany the caravan. The maximum of out-of-door life will be led. For amusement fishing, hunting, sightseeing and visiting famous battlefields have been planned. The route includes Kentucky, Tennessee, Virginia, the Carolinas, Georgia, Alabama and Mississippi. The caravan will return to Indianapolis in the spring of 1911.

SINCE August 1, the following articles have been accepted by the Council on Pharmacy and Chemistry of the A. M. A. for New and Nonofficial Remedies:

Friable Tablets Protan 2½ gr., H. K. Mulford Co.

Friable Tablets Protan 5 gr., H. K. Mulford Co.

Friable Tablets Protan 7½ gr., H. K. Mulford Co.

Guaiacodeine (New York Quinine & Chemical Works).

Sophol (Farbenfabriken of Elberfeld Co.).

SINCE the publication of the September number of THE JOURNAL the following physicians have been reinstated as members in the Indiana State Medical Association:

ALLEN COUNTY

FORT WAYNE

L. L. Gardner

HANCOCK COUNTY

MCCORDSVILLE

Ed. Bennett

MADISON COUNTY

ANDERSON

S. C. Wilson

W. W. Kneale

W. H. Merson

A. W. Collins

J. W. Crismond

D. S. Quickel

Thos. J. O'Neil

MARION COUNTY

INDIANAPOLIS

F. H. Hibben

D. L. Kahn

G. A. Sigler

DEKALB COUNTY

AUBURN

D. M. Hines

RANDOLPH COUNTY

LYNN

J. S. Blair

WINCHESTER

E. W. Rine

SPENCER COUNTY

LAKE

J. C. Jolly

CHRISNEY

A. M. Bean

GENTRYVILLE

G. W. Bradley

WHITLEY COUNTY

LARWILL

L. W. Tennant

CHURUBUSCO

F. M. Magers

DURING the present term of the Federal Court for the District of Indiana, ten individuals or firms are said to have been fined for violation of

the pure food law. Among these were the Wells Medicine Company, Lafayette, for selling "Wells' Dime Headache Cure"; G. R. Summers, South Bend, for misbranding "Mrs. Summers' Harmless Headache Remedy"; "The Sure Pop Company," Terre Haute, for misbranding in the label that "Sure Pop cures headache and neuralgia." The case against the Evansville Bottling works is still pending. This company is said to use cocaine in "Shelburn's Cola." The common violations of the law in the state are misbranding of the weights of cheese, adulteration of vinegar, cottonseed meal and whisky, and false labeling in shipments of apricots.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION

Fort Wayne Session, Sept. 29 and 30, 1910

HOUSE OF DELEGATES

First Meeting, Wednesday Night, September 28

Meeting called to order by President T. C. Kennedy, who announced that preceding the regular order of business, Mr. I. D. Hoffman, president of the American Society of Heating and Ventilating Engineers, would like to make a few remarks on the question of a law compelling the proper ventilating of school buildings, public buildings and buildings in which people work in large numbers. Mr. Hoffman called attention to the importance of the subject and the interest which the medical profession should take in it, and asked that the House of Delegates, if it saw fit, should appoint a committee to meet with a similar committee from the American Society of Heating and Ventilating Engineers to discuss ways and means of accomplishing the passage of a law which will benefit the people of the state in the matter under consideration. Motion was made and carried that the president appoint a committee of three to act as a permanent committee to confer with a committee from the American Society of Heating and Ventilating Engineers, and to act in the capacity suggested by Mr. Hoffman (committee to be appointed later).

President Kennedy then presented his address to the House of Delegates, in which he referred to the fact that the constitution and by-laws have not been followed rigidly in conducting the affairs of the association, and recommended that not only shall the constitution and by-laws be followed rigidly in the future but that certain amendments be adopted for the purpose of furthering the best interests of the association and systematizing the conduct of its business affairs. Moved and carried that a committee of three be appointed to take up the recommendations of the president and report to the House of Delegates at its regular meeting on Thursday. The committee appointed was as follows: A. M. Hayden, Evansville; W. F. Howat, Hammond, and Allen Pierson, Spencer.

Next followed the consideration of the reports of committees as published in the September number of

THE JOURNAL, and such committees as customarily report at the first meeting of the House of Delegates.

The chairman of the Committee on Credentials stated that he thought a good many misunderstood the new rule concerning the presentation of credentials ten days before the annual session, and in consequence many of the delegates failed to send in their credentials. The committee therefore recommended that every man who has been reported to the secretary as an accredited delegate be allowed to serve in that capacity. Moved and carried that the report with its recommendations be accepted.

The Committee on Inebriety, through the Secretary of the Association, reported its recommendations as printed in THE JOURNAL. Following a rather free discussion of the recommendations a motion was finally made and carried that the House of Delegates approve that part of the report which deals with the establishment of a state hospital for the treatment of inebriates. The matter was then referred to the Committee on Public Policy and Legislation with instructions to aid the Committee on Inebriety in attempts to secure a state hospital for the treatment of inebriates.

The recommendations of the Committee on Tuberculosis were then presented, and a motion was made and carried that the report be adopted and that the President be authorized to appoint a committee of three whose duty it shall be to take up the various recommendations of the committee and urge the state legislature to adopt them.

The report of the Committee on the Prevention of Venereal Diseases, as also the report of the Committee on Pathology, were adopted as published in THE JOURNAL.

Secretary Heath then read the amendment to the constitution, Section III, Article 9, presented at the Terre Haute session for consideration. The section as amended would read as follows: "The officers of this Association, except councilors, shall be elected by the House of Delegates on the morning of the last day of the annual session, but no delegate nor councilor shall be eligible to any office named in the preceding section, except that of councilor, and no person shall be elected to any such office who is not in attendance at the annual session, and who has not been a member of the Association for the past two years. The councilors shall be elected by the respective district societies, providing that if any district should exist without a society the councilor for such a district shall be elected by the House of Delegates."

It was moved and seconded that the amendment to the constitution be adopted. It was also moved and seconded that the motion be laid on the table. The latter motion was lost. After considerable discussion of the original motion it was found that according to the constitution this amendment should have been published twice, and as this had not been done the original motion was withdrawn and a motion offered that the amendment be submitted to THE JOURNAL to be published twice and presented to the House of Delegates next year. Motion seconded and carried.

Adjourned.

F. C. HEATH, Secretary.

Second Meeting, Thursday, September 29

The second meeting of the House of Delegates convened at 2 p. m., September 29. Meeting called to order by President T. C. Kennedy.

The Committee appointed to consider the President's recommendations reported as follows:

To the House of Delegates of the Indiana State Medical Association:

We, your Committee to whom was referred the address of your President, beg leave to recommend as follows:

1. That it would be to the best interests of the Association that all standing committees be appointed by the President of the Association.

2. That the President and Secretary of the Association be *ex-officio* members of all standing committees.

3. That the by-laws of the Association at present provide for a Committee of five who shall compose the Committee on Public Policy and Legislation, and we recommend that this by-law be strictly adhered to in the future.

4. That the matter of inviting guests be left entirely to the Committee on Scientific Work.

5. That the Committee on Scientific Work shall have full power to fill the program as they deem best without considering whether or not the papers or reports have been presented in a county society.

6. That the restrictions now existing as to the selection of vice presidents from the list of presidents of District Societies only, be removed, and the Association have full power to select its various officers from its membership without regard to their having served as officers in subordinate societies.

7. That the by-laws of the Indiana State Medical Association be amended so as to conform with these recommendations.

8. We further recommend that hereafter a strict adherence to the constitution and by-laws as laid down by the Association will be to the best interests of the profession, and will obviate much of the friction and the discontent that are at present apparent.

Respectfully submitted,

A. M. HAYDEN,
ALLEN PIERSON,
W. F. HOWAT.

The report as read was adopted, and Dr. Howat, of the Committee, then presented amendments to the by-laws as suggested in the report. These amendments were given first reading, final action being deferred, according to the rules, until the next day's meeting. Similar action was taken on Dr. Hayden's proposed amendment to strike out the provision requiring delegates to send in credentials ten days in advance of the session. (These amendments will be found in full in the minutes of the final meeting.)

On motion of Dr. A. M. Hayden, the President was authorized to appoint a committee of three to report as soon as possible on the subject of medical defense in suits for malpractice. The President appointed the following committee: Drs. G. D. Kahlo, of French Link; A. C. Kimberlin and A. E. Sterne, of Indianapolis.

Dr. J. H. Weinstein, of Terre Haute, moved that the annual dues be raised to two dollars, and on motion of Dr. M. F. Porter, Fort Wayne, the consideration of this matter was postponed until the Friday morning meeting.

Dr. F. A. Tucker, of Noblesville, made a motion, which was duly seconded and carried, that the finance committee of the Council report at the Friday meeting of the House of Delegates on the financial affairs of THE JOURNAL.

Dr. W. H. Stemm, of North Vernon, then offered the following resolutions:

WHEREAS, After years of education and agitation the American medical profession have succeeded in enacting into law the Pure Food and Drugs Act, the interpretation and enforcement of which was placed in the Department of Agriculture, and

WHEREAS, The Indiana State Board of Health having taken an advanced position, in ruling out of the state all misbranded and adulterated foods, particularly in reference to such foods as have been chemically preserved with benzoate of soda and other chemical preservatives; therefore, be it

Resolved, That the Indiana State Medical Association, in annual convention assembled in Fort Wayne, Indiana, September 29 and 30, 1910, affirms its confidence in and active support of the State Board of Health in its efforts to protect the public health and to drive out of the state all kinds of impure and adulterated foods, including foods artificially preserved with benzoate of soda and other chemicals, and be it further

Resolved, That we reaffirm our conviction that the decision of the Referee Board appointed by ex-President Roosevelt be not accepted as final, and that further investigation be conducted along the broadest lines for the conservation of the health and vitality of the people.

A motion to postpone indefinitely the adoption of the resolutions was defeated, and a motion to adopt the resolutions was carried.

Adjourned.

F. C. HEATU, Secretary.

Third Meeting, Friday Morning, September 30

Meeting called to order by President T. C. Kennedy, who announced that the report of the Committee on Education had been inadvertently omitted at the first meeting of the House of Delegates, and the Chairman, Dr. Miles F. Porter, was asked to make his report (published in the September number of THE JOURNAL) which was unanimously adopted. The President was authorized to appoint a committee of three to carry out the recommendations of the committee, this special committee to have the power to enlarge its membership if deemed expedient.

The committee appointed to consider the matter of circulating literature against quackery, reported as follows:

Since there has been issued from the press of the Journal of the A. M. A. several pamphlets exposing quacks and their nefarious methods, which can be had in quantities at small cost, we recommend that the various county medical societies throughout the state be urged through THE JOURNAL of this Association to supply themselves with this literature and through their officers, executive committees and individual members, see that it gets into the hands of thoughtful and reasonable laymen in their respective communities, that copies be supplied to libraries and reading tables, and that social and literary clubs be interested in disseminating the truths contained in these pamphlets, to the end that the public may be in some measure relieved from the awful toll in money and health paid the soulless wretches who prey on its credulity.

ALLEN PIERSON,
J. McLEAN MOULDER,
MILES F. PORTER.

The report was unanimously adopted.

In response to Dr. Tucker's motion calling for information about the financial affairs of THE JOURNAL, the

president of the Council, Dr. W. N. Wishard, of Indianapolis, made a statement in which he showed that the action of the Council in establishing THE JOURNAL and entering into an agreement with the editor and manager was entirely within the powers accorded to the Council in the by-laws; that the details of the action of the Council had been published in THE JOURNAL; that regular reports of the financial condition of THE JOURNAL had been made at the annual meetings of the Council and published in THE JOURNAL; that the editors of THE JOURNAL had at all times solicited and received the suggestions and recommendations of the Council as to policy and management of THE JOURNAL and that the editors had received hardly any compensation for their work, in fact, an amount ridiculously small, considering the amount of time and work given, and the excellent quality of THE JOURNAL as shown by the recommendations received from all sources.

Dr. Bulson, the editor of THE JOURNAL, was then called on for a statement, and he made a comprehensive explanation of the manner in which THE JOURNAL was started; the necessity of having THE JOURNAL financially backed by an individual instead of the Association, owing to the fact that the Association had no money for the establishment of a journal, and was not liable for debts contracted; that the affairs of THE JOURNAL had been conducted economically as indicated by the increased cost of publishing many other state association journals; and that THE JOURNAL had been published without thought of profit, and without even such compensation to the editors as the contract with the Council would permit.

On motion of Dr. M. F. Porter, of Fort Wayne, a unanimous vote of thanks and an expression of confidence was given to Dr. Bulson for his splendid work on THE JOURNAL, and the action of the Council relative to THE JOURNAL was fully endorsed.

A motion to combine the offices of editor and secretary was laid on the table by a vote of 29 to 25.

Dr. W. N. Wishard, Chairman of the Council, on behalf of the Council, made a complete statement concerning his correspondence and conversations with Governor Marshall about the opposition of the medical profession to Dr. Smelzer as a representative of the regular medical profession upon the State Board of Medical Registration and Examination, on the grounds of incompetency, lack of education, record of failure to pass the Board himself, and his alliance with the osteopathic member of the Board to keep down the standard so that more fees would come to the Board.

Dr. Smelzer, who was present was given an opportunity to defend himself, and admitted that he had failed to pass his first examination before the Board, as also that he had voted against raising the requirements for medical practice, but he denied that he had said that this was for the purpose of getting more fees. The latter statement was controverted by Dr. D. W. Stevenson, of Richmond.

In the discussion which followed, several members stated that Dr. Smelzer's speech was the best possible evidence of his incompetency as a member of an educational board and that as he does not properly represent the regular medical profession of Indiana the Governor of the state should comply with the repeated requests of the Indiana State Medical Association and appoint a member on the Board to represent the regular medical profession and that such appointee should have the recommendation and endorsement of the Association.

On motion of Dr. Tucker, of Noblesville, which was unanimously carried, the course of the Council and its chairman concerning Dr. Smelzer's position on the Board was endorsed; a continuance of the same course was requested, and the Council was authorized to select some member of the Indiana State Medical Association and present his name to the Governor as the Association's recommendation for the position now held by Dr. Smelzer on the Board of Medical Registration and Examination.

The following amendments to the by-laws, coming up on second reading under the rules, were unanimously passed, the first three on motion of Dr. W. F. Howat and the fourth on the motion of Dr. A. M. Hayden.

Section 11, Chapter IV, was amended by striking out the last sentence. The section as amended reads as follows: "It shall divide the state into councilor districts, specifying what counties each district shall include, and when the best interests of the Association and profession will be promoted thereby, organize in each district a medical society, and all members of component county societies and no others shall be members of such district societies."

Section 1, Chapter VIII, was amended to read as follows: "A committee on scientific work, a committee on public policy and legislation, a committee on arrangements and such other committees as may be necessary. Such committees shall be appointed by the President of the Association, and the President and Secretary of the Association shall be *ex-officio* members of standing committees."

Section 4, Chapter VIII, was amended to read as follows: "The Committee on Arrangements shall provide suitable accommodations for the meeting places of the Association, and of the House of Delegates, and of their respective committees, and shall have general charge of all the arrangements. Its chairman shall report an outline of its arrangements to the Secretary of the Association for publication in the program, and shall make additional announcements during the session as occasion may require."

Section 11, Chapter IX, of the by-laws was amended to read as follows: "At some regular meeting in advance of the annual session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates in this Association, and the Secretary of the Society shall send a list of such delegates and alternates to the Secretary of this Association at least thirty days before the annual session. No one shall be entitled to a seat in the House of Delegates unless his credentials as a delegate or alternate, properly signed by the Secretary and President of the County Society, be presented to the Committee on Credentials at the time of the annual session."

The Committee on Medical Defense, consisting of Drs. G. D. Kahlo, A. C. Kimberlin and A. E. Sterne reported as follows:

WHEREAS, The experience of other state medical associations in which such a plan has been in operation has been not only a decrease in the number of suits for malpractice, but an increased membership and interest in the Association, and

WHEREAS, Approximately only one dollar a year per capita membership is sufficient to meet the requirements, we, therefore, submit the following recommendations:

1. The adoption of a plan of Medical and Surgical Defense for the members of the Indiana State Medical Association.

2. That a fund for such purpose be set aside out of the annual dues.

3. That the dues for the ensuing year be increased to \$2, and that the surplus remaining in the treasury after paying outstanding indebtedness and current expenses be devoted to the establishment of a sinking fund to meet the expenses of this plan after it has been incorporated.

4. That until a final working plan be adopted no active defense be undertaken.

5. That this Association shall not undertake more than to provide competent legal talent in the defense of its members in civil cases only.

6. That under no circumstances shall it incur any liability on account of damages awarded.

7. That in order to perfect detailed working plans for this purpose further consideration is necessary, and that the final report of this committee be submitted at the next annual session.

This report was accepted and the recommendations adopted.

The motion of Dr. Weinstein to fix the dues at two dollars, offered Thursday and according to the rules deferred for final action one day later, was brought up for action and passed unanimously.

On motion, duly carried, the incoming president was authorized to appoint a committee of five to procure, by education and legislation, such action as may be necessary to eradicate preventable blindness, and the Association appropriated fifty dollars for the expenses of the committee in carrying on its work.

The election of officers resulted as follows: President, Frederick C. Heath, Indianapolis; First Vice-President, John N. Hurty, Indianapolis; Second Vice-President, A. S. Diekey, Tipton; Third Vice-President, J. P. Salb, Jasper; Secretary, Chas. N. Combs, Terre Haute; Treasurer, David W. Stevenson, Richmond; Councilors for three years, Third District, W. J. Leach, New Albany; Sixth District, C. S. Hougland, Milroy; Ninth District, W. H. Williams, Lebanon; Twelfth District, B. Van Sweringen, Fort Wayne. Delegates to the American Medical Association for two years, Miles F. Porter, Fort Wayne, and Frederick A. Tucker, Noblesville; Alternates, Curtis Bland, Greensburg, and J. B. Garber, Dunkirk.

On motion duly carried, Indianapolis was selected as the place for the next annual session.

A unanimous vote of thanks was given to the President for his interest in and work for the Association. A unanimous vote of thanks was also extended to the Committee on Arrangements, the officers and members of the Fort Wayne Medical Society and their wives and the people of the city of Fort Wayne generally, for the royal manner in which the Association had been entertained.

Adjourned.

F. C. HEATH.

THE COUNCIL

Fort Wayne Session, September, 1910

First Meeting, Wednesday Evening, September 28

There being no regular business to come before the Council an informal discussion of medical affairs in the various districts was taken up.

The question of raising the dues for the Association was discussed, and in consideration of the fact that

the Association was facing a deficit and that the deficit would increase rather than diminish, it was the general sentiment that the Council should recommend that the dues be increased to two dollars per year.

The question of ethical advertising in *THE JOURNAL* was also considered, and the editor was asked to edit the copy of all advertising so that it will conform to the ethical requirements of *THE JOURNAL*, but that he use his own judgment in refusing advertising from members of the Association who are violating the ethical code, and who have not been disciplined by their local societies.

The President of the Council referred to his correspondence and conversations with the Governor concerning the appointment of Dr. Smelzer to represent the regular medical profession on the Board of Medical Registration and Examination, but action on the report was deferred until a subsequent meeting.

Adjourned. ALBERT E. BULSON, JR., Secretary.

Second Meeting

The Council convened on Thursday afternoon, September 29, and was called to order by the President. The complaint of an advertising agent of New York that he had not been paid commissions on advertising secured for *THE JOURNAL* was presented by Dr. Wishard, the same having been turned over to him by the President of the Association. On motion, by Dr. Daugherty, seconded by Dr. Stemm, and carried, the matter was referred to Dr. Bulson, the editor of *THE JOURNAL*, for such adjustment as he thinks proper.

Dr. Wishard then referred in detail to his correspondence and conversations with the Governor concerning the Smelzer matter, and on motion by Dr. Bulson, seconded by Dr. Stevenson, and duly carried, Dr. Wishard was requested to present the matter in detail to the House of Delegates for action, and with the recommendation that the House of Delegates approve the action of the Council in a request that the Governor appoint some one in the place of Dr. Smelzer to represent the regular medical profession on the Indiana State Board of Medical Registration and Examination.

Adjourned. ALBERT E. BULSON, JR., Secretary.

Third Meeting

The Council convened on Friday morning, September 30, and was called to order by Chairman Wishard. Those present were Drs. Krebs, Knoefel, Stemm, Kemper, Daugherty, Wishard, and the editor of *THE JOURNAL*. The election of officers resulted as follows: Chairman, W. N. Wishard, Indianapolis; Secretary, B. Van Sweringen, Fort Wayne.

Moved by Dr. Knoefel and seconded by Dr. Stemm that Dr. Bulson, the editor of *THE JOURNAL*, be requested to print 200 copies of the revised constitution and by-laws for the use of the officers of the Association and officers of county societies. Motion carried.

Moved by Dr. Kemper and seconded by Dr. Daugherty that Dr. Bulson, the editor of *THE JOURNAL*, be empowered to secure all of the stationery for the officers, including councilors, of the Association, and to save expense that one form be used, and that the councilor map be placed on the back of every letter-head. Motion carried.

Moved by Dr. Kemper and seconded by Dr. Stemm that Dr. Bulson, the editor of THE JOURNAL, be asked to attend the regular meetings of the Council for the purpose of reporting as to the condition of THE JOURNAL, and receiving recommendations and suggestions from the Council, and that his actual expenses in attending all meetings of the Council, except such meetings as are held at the time of the annual session, shall be paid by the Association. Motion unanimously carried.

Moved by Dr. Knoefel and seconded by Dr. Stemm that Dr. Kemper's bill in connection with his reports on necrology be allowed.

Motion carried.

Bills amounting to \$459.90 were presented and audited by the finance committee, and ordered paid.

Adjourned.

J. H. WEINSTEIN, Secretary *pro tem*.

REGISTRATION AT THE FORT WAYNE SESSION

H. R. Lowder, Bloomfield.
J. P. Salb, Jasper.
F. J. Young, Milford.
C. Norman Howard, Warsaw.
H. J. Defrees, Nappanee.
W. R. Davidson, Evansville.
G. D. Miller, Logansport.
G. E. Paff, Gary.
Maurice H. Krebs, Huntington.
Miles F. Porter, Fort Wayne.
B. Van Sweringen, Fort Wayne.
Alfred Kane, Fort Wayne.
D. W. Stevenson, Richmond.
J. McLean Moulder, Kokomo.
A. E. Stinson, Athens.
A. M. Hayden, Evansville.
W. A. Hager, South Bend.
C. A. Daugherty, South Bend.
LeMarr Knepple, Kokomo.
Earl R. Gibbs, Greenfield.
G. R. Andrews, Muncie.
D. A. Shoemaker, Bluffton.
E. M. Van Buskirk, Fort Wayne.
J. H. Gilpin, Fort Wayne.
G. Van Sweringen, Fort Wayne.
T. C. Kennedy, Indianapolis.
H. T. Montgomery, South Bend.
G. W. H. Kemper, Muncie.
C. A. Endieott, Lebanon.
W. W. Swarts, Auburn.
F. M. Hines, Auburn.
Jos. H. Weinstein, Terre Haute.
D. S. Linvill, Columbia City.
C. L. Souder, Columbia City.
Jessie C. Calvin, Fort Wayne.

J. C. Wallace, Fort Wayne.
Chas. N. Combs, Terre Haute.
Albert E. Bulson, Jr., Fort Wayne.
August Knoefel, Linton.
M. A. Boor, Terre Haute.
Herma A. Beck, Lebanon.
I. N. Hatfield, Bluffton.
D. V. McClary, Dale.
C. C. Campbell, Walton.
A. P. Letherman, Valparaiso.
Maurice Rosenthal, Fort Wayne.
Erie A. Crull, Fort Wayne.
W. H. Lane, Angola.
Alice B. Williams, Columbia City.
S. D. Beavers, Decatur.
W. E. Smith, Decatur.
Chas. E. Linton, Medaryville.
W. H. Stemm, North Vernon.
Eldridge Shanklin, Hammond.
W. F. Howat, Hammond.
T. W. Oberlin, Hammond.
Louis Severin, Bluffton.
J. W. Benham, Columbus.
R. Q. Tavinier, Huntington.
Curtis Bland, Greensburg.
G. E. Barnett, Fort Wayne.
J. E. MacHugh, Fort Wayne.
H. A. Duemling, Fort Wayne.
C. B. Stemen, Fort Wayne.
H. S. Thurston, Indianapolis.
Ralph S. Chappell, Indianapolis.
A. P. Brehman, Fort Wayne.
H. M. Hall, Camden.
G. G. Brudi, New Haven.
J. M. Dimmen, Fort Wayne.
O. B. Williams, Andrews.
A. H. Shaffer, Huntington.
E. E. Morgan, Fort Wayne.

Mary Wickens, Richmond.
J. E. King, Richmond.
M. T. Jay, Portland.
W. E. Carver, Albion.
W. H. Thompson, Wima-mae.
I. W. Ditton, Fort Wayne.
Allen Pierson, Speneer.
B. P. Carter, Macy.
O. R. Lyneh, Peru.
W. H. Dinsmore, Kramer.
C. C. Kimmel, Fort Wayne.
J. E. McArdle, Fort Wayne.
C. C. Rayl, Monroe.
C. H. McNully, Logansport.
M. L. Plough, Elwood.
C. H. English, Fort Wayne.
W. R. Moffett, Lafayette.
C. H. Emery, Bedford.
W. H. Williams, Lebanon.
G. E. Smith, Peru.
G. E. Denny, Madison.
W. J. Leach, New Albany.
E. M. Hoover, Elkhart.
F. A. Tueker, Noblesville.
H. Y. Mullin, Rockford.
I. N. Trent, Muncie.
Wm. S. Walker, Lafayette.
F. C. Heath, Indianapolis.
Albert E. Sterne, Indianapolis.
Geo. D. Kahlo, French Lick.
W. D. Barnhill, Fort Wayne.
S. D. Sledd, Fort Wayne.
Mrs. H. J. Defrees, Nappanee.
Chas. P. Cook, New Albany.
A. C. Kimberlin, Indianapolis.
R. H. Ritter, Indianapolis.
F. M. Dickason, Petroleum.
Noah Zehr, Fort Wayne.
O. W. McQuown, Marion.
V. V. Cameron, Marion.
Jas. A. Mattison, Marion.
G. R. Daniels, Marion.
E. W. Poinier, Andrews.
S. V. Wilking, Roanoke.
Frank Broughton, Waterloo.
E. E. Ash, Goshen.
I. J. Becknell, Goshen.
J. L. Gilbert, Kendallville.
J. A. MacDonald, Indianapolis.
J. B. Berteling, South Bend.
D. F. Lee, Indianapolis.
E. R. Sisson, Greenfield.
Fred A. Metts, Ossian.
E. W. Dyar, Ossian.
J. H. Bowser, Syracuse.
A. J. MacDonald, Bedford.
David I. Ross, Indianapolis.
Theodore Potter, Indianapolis.
A. W. Brayton, Indianapolis.
Geo. I. Inlow, Shelbyville.
H. E. Glock, Fort Wayne.

C. E. Cottingham, Indianapolis.
C. F. Nen, Indianapolis.
E. D. Clark, Indianapolis.
N. B. Smith, Fort Wayne.
Edgar F. Kiser, Indianapolis.
P. G. Fermier, Leesburg.
W. N. Wishard, Indianapolis.
Chas. R. Daneer, Fort Wayne.
L. J. Baldwin, Westfield.
Z. H. Fodrea, Westfield.
H. Van Sweringen, Fort Wayne.
E. Randall, Ambia.
H. Stemen MacBeth, Fort Wayne.
S. H. Havice, Fort Wayne.
B. W. Rhamy, Ft. Wayne.
H. B. Hill, Logansport.
J. Frank Dimmen, Ft. Wayne.
L. L. Gardner, Ft. Wayne.
Chas. E. Caylor, Pennville.
J. M. Pulliam, Ft. Wayne.
S. T. Henderson, Ft. Wayne.
F. V. Martin, Michigan City.
E. G. Blinks, Michigan City.
G. S. Row, Indianapolis.
Charles Rothchild, Ft. Wayne.
Allen Hamilton, Ft. Wayne.
W. O. Gross, Ft. Wayne.
Chas. G. Beall, Ft. Wayne.
J. B. McEvoy, Ft. Wayne.
Geo. D. Marshall, Kokomo.
E. J. McOsear, Ft. Wayne.
T. C. Cochran, Kokomo.
O. D. Hutto, Kokomo.
P. C. Holland, Bloomington.
G. F. Holland, Bloomington.
W. Enslin, Ft. Wayne.
H. R. Allen, Indianapolis.
Ben Perley Weaver, Ft. Wayne.
W. W. Carey, Ft. Wayne.
L. T. Rawles, Hometown.
E. A. Ish, Laotto.
A. E. Fauve, Ft. Wayne.
G. L. Greenawalt, Ft. Wayne.
W. D. Calvin, Ft. Wayne.
G. W. McCaskey, Ft. Wayne.
Henry Ranke, Ft. Wayne.
D. W. Dryer, Lagrange.
A. H. MacBeth, Ft. Wayne.
J. W. Hill, South Bend.
C. C. Terry, South Bend.
J. P. Simonds, Indianapolis.
Geo. R. Osborne, Laporte.
Geo. F. Keiper, Lafayette.
F. M. Reynolds, Montpelier.
Walker Schell, Terre Haute.
C. C. Rozelle, Lagrange.
A. J. Hostetler, Lagrange.

- R. J. Danner, Elnora.
 Jos. D. Heitger, Bedford.
 E. L. Youngblood, Boonville.
 Fred W. McK. Ruby, Union City.
 A. May, Crothersville.
 G. Reynard, Union City.
 W. F. King, Columbia City.
 C. R. Souder, Indianapolis.
 Bennett V. Caffee, Terre Haute.
 Mary T. Ritter, Angola.
 Marie R. Smith, Orland.
 U. G. Poland, Muncie.
 H. R. Alburger, Bloomington.
 C. W. McClintock, Pittsboro.
 P. F. Martin, Indianapolis.
 C. O. Bechtol, Marion.
 H. E. Line, Chili.
 J. W. Dunfee, Etna Green.
 J. O. Ward, Peru.
 Nettie B. Powell, Marion.
 J. Z. Powell, Logansport.
 A. W. Deerking, Oolitic.
 Thos. J. Creel, Angola.
 J. C. Webster, Lafayette.
 L. J. Willien, Terre Haute.
 J. N. Hurty, Indianapolis.
 Simon J. Young, not given.
 Geo. R. Leonard, South Milford.
 Chas. Stoltz, South Bend.
 Ed. H. Kruse, Ft. Wayne.
 J. W. Eidson, Plymouth.
 H. P. Preston, Plymouth.
 D. C. Knott, Plymouth.
 Helen Knabe, Indianapolis.
 J. W. Squires, Ft. Wayne.
 Louis A. Balling, Kramer.
 E. D. Smith, Leo.
 C. F. Kaadt, Ft. Wayne.
 A. W. Tobias, Elwood.
 A. L. Stilson, Indianapolis.
 W. F. Hughes, Indianapolis.
 Ada E. Schweitzer, Indianapolis.
 Clay A. Ball, Muncie.
 R. O. McAlexander, Indianapolis.
 Bernhard Erdman, Indianapolis.
 M. M. Clapper, Hartford City.
 H. C. Davisson, Hartford City.
 F. E. Moyer, Pennville.
 W. T. Lawson, Danville.
 J. L. MacElroy, Aurora.
 L. P. Drayer, Ft. Wayne.
 E. E. Padgett, Indianapolis.
 David J. Mercer, Poe.
 C. D. Blue, Toesin.
 F. E. Radcliffe, Bourbon.
 D. M. Green, Muncie.
 F. S. Browne, Corunna.
 Bertha Goba, Ft. Wayne.
 J. L. Redding, Bluffton.
 A. H. Northrup, Markle.
 R. B. McKeeman, Ft. Wayne.
- J. H. Hosford, Ft. Wayne.
 A. F. Phillips, Ft. Wayne.
 Mary A. Whery, Ft. Wayne.
 P. N. Sutherland, Angola.
 D. A. Bethea, Terre Haute.
 H. D. Wood, Angola.
 L. T. Wood, Angola.
 A. J. Kimmell, Hudson.
 V. A. Shanklin, Terre Haute.
 O. M. Graham, Geneva.
 I. M. Myers, Maples.
 E. C. Garber, Dunkirk.
 D. E. Johnston, Moores Hill.
 C. S. Bond, Richmond.
 G. N. Lake, Pleasant Lake.
 Frank B. Wynn, Indianapolis.
 L. O. Williams, Anderson.
 M. Austin Cary, Silver Lake.
 W. H. Baker, South Bend.
 M. F. Johnston, Richmond.
 W. C. Chaffee, Huntington.
 Erwin Wright, Huntington.
 M. C. Kimball, Converse.
 Z. W. Beaman, North Manchester.
 R. E. DeWees, Keystone.
 Jewett V. Reed, Indianapolis.
 W. A. Hollis, Hartford City.
 D. D. Jones, Berne.
 B. W. Egan, Flora.
 L. L. Ball, Muncie.
 J. W. Wright, Kokomo.
 W. F. Schrader, Ft. Wayne.
 N. W. Yencer, Richmond.
 S. G. Smelser, Richmond.
 John E. Yarling, Peru.
 J. C. Fritz, Deedsville.
 W. P. Whery, Ft. Wayne.
 T. O. Redden, Jolietville.
 C. M. Glock, Arcola.
 W. D. Schwartz, Portland.
 F. Greenwell, Huntington.
 J. W. McKinney, Bluffton.
 F. C. Hershey, Carmel.
 John S. Sprowl, Warren.
 W. F. Shumaker, Butler.
 O. H. Swantusch, Metz.
 L. W. Tennant, Larwill.
 C. E. Linton, Walkerton.
 W. F. Miranda, Walkerton.
 F. G. Grisier, Columbia City.
 L. A. Spaulding, Bluffton.
 W. E. Hosman, Akron.
 M. M. Eckelman, Elkhart.
 A. R. Wyatt, Lagrange.
 H. W. Greist, New Castle.
 E. K. Westhafer, New Castle.
 H. F. Costello, Decatur.
 A. S. Diekey, Tipton.
 H. E. Grishaw, Tipton.
 A. W. Gifford, Tipton.
 Aaron L. Bowman, Rochester.
 B. Ratliff, West Newton.
- N. I. Kitheart, Columbia City.
 J. M. Miller, Decatur.
 G. D. Richardson, Van Buren.
 J. N. Toney, Van Buren.
 J. N. Study, Cambridge City.
 E. E. Kirk, Spiceland.
 R. M. Bolman, Ft. Wayne.
 C. J. Overman, Marion.
 M. A. Farver, Middlebury.
 A. W. Brown, Bluffton.
 J. C. Kirkpatrick, Roll.
 G. B. Stemen, Ft. Wayne.
 A. J. Kesler, Ft. Wayne.
 M. C. Clokey, Huntington.
 J. M. Hicks, Huntington.
 F. M. Magers, Churubuseo.
 H. A. Ray, Grabill.
 M. E. Klingler, Garrett.
 S. Koontz, Roanoke.
 B. F. Hoy, Syracuse.
 E. K. Schurtz, Waterloo.
 E. T. Dippell, Huntington.
 B. W. Wiseman, Culver.
 Geo. E. Fulton, Bluffton.
 J. M. Ketcham, Indianapolis.
 J. T. Biggerstaff, Bippus.
 Walter A. Domer, Wabash.
 W. C. Sarber, Argos.
 W. S. Shafer, Rochester.
 C. L. Slonaker, Leiters Ford.
 L. D. Eley, Plymouth.
 M. G. Yocum, Mentone.
 I. E. Perry, Bippus.
 Ira Leekrone, Silver Lake.
 Geo. H. Dando, Montpelier.
 R. F. Frost, Huntington.
 H. K. Melvaine, Huntington.
 W. H. Waller, Angola.
 P. J. Barens, Crawfordsville.
 W. A. Fankboner, Marion.
 James A. Work, Elkhart.
 J. C. Fleming, Elkhart.
 G. W. Spohn, Elkhart.
 F. N. Dewey, Elkhart.
 Chas. M. Kennedy, Camden.
 O. P. Franke, Churubuseo.
 L. F. Schmauss, Alexandria.
 C. R. Long, Pierceton.
 L. W. Ford, Syracuse.
 W. M. Veazey, Avilla.
 Chas. S. Wiseman, Lakeville.
 E. G. Coverdale, Decatur.
 J. E. Geary, Ft. Wayne.
 O. V. Schuman, Columbia City.
 J. William Scott, Columbia City.
 J. E. Lucky, Wolf Lake.
 H. G. Griebel, Ft. Wayne.
 E. D. Stuekman, New Paris.
 E. V. Nolt, Columbia City.
 Chas. L. Wright, Huntington.
 Chas. H. Good, Huntington.
- W. F. Smith, Huntington.
 John R. Harrold, Roll.
 Geo. B. Morris, Poneto.
 Wm. H. Gilbert, Evansville.
 J. E. Bickel, Ft. Wayne.
 Norma B. Ellis, Ft. Wayne.
 M. D. Gwin, Rensselaer.
 Wm. S. Row, Indianapolis.
 R. V. Murray, Zanesville.
 J. L. McBride, Zanesville.
 Albert E. Stoler, Ft. Wayne.
 A. D. Schneider, Ft. Wayne.
 J. E. Cooper, Auburn.
 M. Thorner, Indianapolis.
 W. B. MacDonald, New Augusta.
 H. E. Steinman, Monroeville.
 S. C. Waters, Middletown.
 C. J. Loring, Rochester.
 H. W. Taylor, Rochester.
 S. R. White, Laud.
 I. R. Thrasher, Indianapolis.
 Olive O. Nelson, Huntington.
 J. Willard Parrish, Shelbyville.
 W. S. Grayston, Huntington.
 B. H. B. Grayston, Huntington.
 N. W. Clark, Rossville.
 Lorin W. Smith, Wabash.
 D. E. Kauffman, Monroeville.
 Will Shimer, Indianapolis.
 C. M. Mix, Muncie.
 K. C. Evans, Edgerton.
 W. Hildebrand, Topeka.
 W. H. Lane, Angola.
 C. W. Gordon, Ft. Wayne.
 S. C. Wagner, Wakarusa.
 F. A. McGrew, LaPorte.
 L. C. Cline, Indianapolis.
 Thos. B. Noble, Indianapolis.
 B. Pulskamp, Rome City.
 Wm. H. Short, Lagrange.
 C. C. Rozelle, Lagrange.
 G. W. Anglin, Warsaw.
 G. F. Beasley, Lafayette.
 G. W. Grossnickle, North Manchester.
 F. S. Kitson, North Manchester.
 J. S. Boyers, Decatur.
 E. H. Underwood, Ft. Wayne.
 D. C. Wybourne, Sheldon.
 E. H. Botts, Zanesville.
 A. Reusser, Berne.
 M. D. Parrish, Monroe.
 A. C. MacDonald, Warsaw.
 T. J. Shackelford, Warsaw.
 G. B. Jackson, Indianapolis.
 C. B. Goodwin, Kendallville.
 G. J. Studer, Ft. Wayne.
 Fred W. Grayston, Huntington.

**ALLEN COUNTY
FORT WAYNE MEDICAL SOCIETY**

(Meeting of June 14)

Society met in regular session in the assembly room with 19 members present. Minutes of the May 31st and June 13th meetings read and approved. The meeting consisted of reports from the various sections of the A. M. A. Dr. Albert E. Bulson, Jr., gave a report from the Section on Ophthalmology; Dr. M. F. Porter, from the Surgical Section, and Dr. E. E. Morgan from the Practice of Medicine. Dr. C. E. Barnett gave a report of the American Urologic Association.

The committee on resolutions reported as follows:

WHEREAS, The call of death has summoned from our ranks at the noon hour of his life one of our loved and honored members and co-workers, Dr. Carl Schilling, therefore be it

Resolved, By the Fort Wayne Medical Society—the Medical Society of Allen County—that in the death of Dr. Schilling we feel that we have lost a valuable, honored and useful member, the community a splendid citizen and the family a devoted father and husband.

Resolved, That we extend to the family and friends our sincere sympathy in their bereavement.

Resolved, That a copy of these resolutions be sent to the widow of Dr. Schilling, that they be printed in the daily papers and be spread on the minutes of the society.

M. F. PORTER,
C. B. STEMEN,
A. P. BUCHMAN.

Adjourned.

J. C. WALLACE, Secretary.

(Meeting of June 21)

Society met in regular session at Hope Hospital with 19 members present.

Dr. G. W. McCaskey reported a case with probably latent uremic condition, in which there were convulsions. Blood taken out and replaced with saline solution. Patient died, the respirations failing first.

Dr. McCaskey exhibited a case of epilepsy, patient aged 41. Pain in left chest; was kicked in left chest sixteen years ago. Had first attack of *petit mal* four months ago, and since that time had attacks on an average of once a week until lately, when he has had as many as 100 a day, with five or six grand *mal* seizures. Dr. McCaskey has been giving 160 gr. of bromids three times a day for two days, then stopping until eliminated. Grand *mal* attacks stopped and *petit mal* attacks much better. Case unique on account of epilepsy occurring at this age and assuming such proportions in four months' time.

Dr. McCaskey's next case presented question of diagnosis between extra-esophageal neoplasm and one of the cordiae end of the stomach. Patient, man aged 58; always well until three months ago, when he had an attack of inflammatory rheumatism of left knee, and in July, 1909, had typhoid fever of five weeks' duration. Complaints of intense pain in back, extending through to front on left side. Had difficulty getting food into stomach. Dr. McCaskey has been unable to get stomach tube into stomach as yet.

Patient with arteriosclerosis; aged 65. For two or three years had some dyspnea on exertion. Three months ago awakened during night with severe dyspnea; since that time has had constant dyspnea during day on slight exertion. Appetite poor. Bowels con-

stipated. Following attacks brown mucus comes up into throat. Heart slightly enlarged. Marked enlargement of liver. Case is one in which the pressure involves the central arteries rather than distal arteries. Blood pressure high. Dr. McCaskey said that under treatment (spirits of glonoin 1 gtt., 2 gtt., and three drops every hour, respectively, for three consecutive days) the blood-pressure dropped from 225 to 185. This demonstrates that arterial spasm plays some part in producing symptoms.

Dr. M. F. Porter presented specimen polycystic kidney, very large. The specimen, fluid and all, weighed at least 12 pounds. Dr. Porter said these conditions are more often malignant than supposed to be. He spoke of this carcinomatous change because during last three months he has had three cases, two of which showed this carcinomatous change. Stone contributing factor. In majority of cases this polycystic condition is double and this should lead us to avoid nephrectomy, except for particular reasons. Nephrotomy with puncture of multiple cysts is being done with success.

Dr. Porter reported history of this case. Enlarged liver fifteen years ago. Recovery. Twelve years ago fell from bicycle. Present trouble dates back fifteen years. Operation, right kidney and upper part of ureter removed. Uninterrupted recovery after operation. Cure not expected, as he had to leave portion of tumor on colon.

CASE 2.—Woman, aged 61, married. Family history negative, except that two sisters died of tuberculosis. Present trouble began three months ago; flowing ever since; os patulous; uterus size of fist, containing soft mass. Operation. Cervical dilatation and curettement done; then abdominal section and panhysterectomy. Frozen section examined and malignancy reported. After removal of uterus found two points from which soft material sprung. Reports from pathologist showed sarcoma.

CASE 3.—Girl, aged 16. Tumor right lower abdomen, which had grown rapidly for last few weeks. Was very large fibroid growing from the iliopsoas fascia. The soft portion accounts for rapid growth.

CASE 4.—Woman fell from buggy, lighting on right shoulder. Three weeks later came to hospital. Palpation under anesthesia disclosed subcoracoid dislocation of head of humerus; subdued crepitus. Skiagraph shows fracture of anatomical neck, with dislocation of head of humerus. Will probably have some ankylosis and more or less painful joint.

Dr. B. W. Rhamy showed specimens under microscope. Sarcoma of endometrium, scirrhus carcinoma of pelvis of kidney and fibroma arising in muscle sheaths.

Adjourned.

J. C. WALLACE, Secretary.

(Meeting of September 6)

Society met in regular session in assembly room, with sixteen members present.

Dr. S. V. Wilking exhibited a case, man, aged 21, farmer. Plays baseball on Sunday and is pitcher. Did not pitch for two weeks prior to consulting Dr. Wilking. Ten days ago noticed right shoulder and arm above elbow were swollen. No pain and no tender points. Forearm $1\frac{3}{4}$ inches larger than left; arm $1\frac{1}{2}$ inches larger than left. Shoulder still swollen. No eruption, little itching and no desquamation. Typhoid fever one year ago. Temperature $100\frac{4}{5}$ right axilla and left $100\frac{1}{5}$. In the discussion Dr.

Porter said he believed the condition to be thrombosis of axillary vein.

Dr. McOscar reported interesting case from diagnostic standpoint. Young man had frequent diarrheal passages for two days, which he checked with an astringent procured at a drug store. Diarrhea recurred after twenty-four hours. Abdomen not distended; no rigidity. Next morning temperature 101, pain general. That evening temperature 103, pain in McBurney's point; diarrhea continued. Operation. Appendix found plastered up against cecum, doubled back on itself and held firmly down by normal peritoneum. End filled with pus and there were two gangrenous spots at point of flexure. Uninterrupted recovery.

Dr. B. Van Sweringen reported two cases of puerperal sepsis. 1. Patient taken with sharp uterine hemorrhage while shopping; did not know she was pregnant. Hemorrhage continued for five weeks, when Dr. Van Sweringen was called. He removed a large placental mass, which was foul and decomposing. The chills which had been present for about ten days stopped at once and did not recur for ten days, when she was taken to hospital and laparotomy done. No focus found in pelvis to explain condition. Thorough curettement was done, but she died five days later.

CASE 2.—When patient was seven months pregnant she developed spasms. Delivered of dead fetus and gradually improved. This occurred in 1908. She came under observation of Dr. Van Sweringen early in 1909; urine still showed albumen and casts. While under treatment again became pregnant and uremic symptoms again assumed prominence at seven months. Put to bed and active eliminative treatment pursued for about ten days when delivery of a live fetus occurred spontaneously. In April of 1910 she came under the care of Dr. Rawles, of Hantertown, for symptoms denoting abortion which had persisted for several days; chills and high fever. Uterus was emptied of a dead fetus. Chills and fever persisted and she was removed to parents' home. In July she was brought to hospital and placed under the care of Dr. Van Sweringen for operation. Pelvic examination showed no cause for operation and blood culture showed streptococci infection. From this a vaccine was made which was administered, together with antistreptococci serum, but with no marked effect on the condition. Death seemed certain and so in desperation Focier's plan of a localized abscess was tried. Fifteen minims of turpentine were injected into the thigh under antiseptic precautions. No further rise in temperature took place, except on one occasion when she developed a perirectal abscess, drainage of which stopped the fever. Abscess was not opened and she left hospital very much reduced, but on the road to complete recovery.

Discussion by Drs. Rawles, Porter and McOscar.

Adjourned. J. C. WALLACE, Secretary.

KOSCIUSKO COUNTY

The regular meeting of the Kosciusko County Medical Society was held August 30. Dr. C. R. Long, Pierceton, spoke on the subject "Summer Diarrheas of Children." In the discussion Dr. J. H. Bowser, Syracuse, advocated the use of injections of cold water after each bowel movement, and after the child passes the cold water to use one per cent. solution of argyrol.

Dr. F. J. Young, Milford, advised the use of a saturated solution of magnesium sulphate, to the pint of which has been added one-half ounce of aromatic sulphuric acid. This is to be given before breakfast in ounce doses (to an adult). Results can be expected in one and a half hours.

Dr. N. A. Cary, Silver Lake, spoke of the good results he had obtained in using an ordinary catheter and a soft four-ounce bulb syringe and injecting the bowels every hour with normal salt solution at body temperature.

Dr. G. W. Anglin, Warsaw, spoke of the use of buttermilk in persistent diarrhea.

Dr. W. S. Leiter, Claypool, has found the following to be of value for diarrheas in children: Calomel, gr. 1/10, combined with bismuth subnitrate, gr. 1, and bismuth subgallate, gr. 1, to be given hourly for ten doses. This is to be followed by a tablespoonful of castor oil (plain or tasteless) and is to be repeated every five hours until the alimentary tract is thoroughly cleansed.

Adjourned.

C. NORMAN HOWARD, Secretary.

NOBLE COUNTY

The Noble County Medical Society met in regular session in the parlors of the Reyher Hotel in Kendallville, Tuesday, September 13.

Dr. Geo. B. Lake, being about to enter the Army Medical Service, tendered his resignation as Secretary-Treasurer, and it was accepted, to take effect after this meeting. Dr. W. F. Carver, of Albion, was elected to fill the vacancy for the remainder of the year.

Dr. W. T. Green, of Albion, in a paper on "The Problems of the County Health Commissioner," spoke of the importance of vital statistics, showing that, since the State protects us in the practice of our profession we should do our duty by the state in this matter. He impressed the point that reports of contagious diseases are the basis of all broad sanitary measures, and that school sanitation is of immeasurable importance.

The discussion, which was opened by Dr. J. W. Morr, of Albion, brought out, among other things, the importance of the regulation of venereal diseases, and the following resolutions were unanimously adopted by the society:

WHEREAS, It appears that venereal diseases are a source of grave danger to the health and happiness of the community, and

WHEREAS, There is at present no way of controlling the spread of these diseases in this state, be it

Resolved, That we, the members of the Noble County (Ind.) Medical Society, favor the passage of a law requiring the reporting of all cases of venereal disease occurring in the state, with a statement of the probable source of infection, and be it further

Resolved, That copies of these resolutions be sent to our state senators and assemblymen.

The paper on "The Problems of the Town Health Officer," by Dr. J. H. Nye, of Cromwell, touched on the importance of the relations between the town health officer and his brother physicians, and the public at large; alluding to the variety of duties which the town health officer is called on to perform and suggesting that it might be well to choose someone other than a busy physician for this office.

Following the scientific program the application for membership in the society of Dr. Ethan A. Ish, of La Otto, was presented and referred to the board of censors.

The following resolution was unanimously adopted:

Resolved, That the Noble County Medical Society sincerely regrets the approaching severance of the ties that bind us to our secretary-treasurer, Dr. Geo. B. Lake. During his association with us he has been enthusiastic and cordial in his every relation and we part with regret, wishing him abundant success wherever his lines may fall.

Adjourned.

GEORGE B. LAKE, Secretary.

SPENCER COUNTY

The Spencer County Medical Society met in regular session with Dr. G. B. DeTar, of Lake, September 21. Minutes of last meeting read and approved. The applications for membership of Drs. A. M. Bean, of Chrisney, G. W. Beadley, Gentryville, and Andy Maslowsky, Mariah Hill, were accepted.

Dr. S. P. Gwaltney read a paper on Chlorosis, in which he said that the trouble came on like simple anemia, with or without menstrual disorder, accompanied by a green-yellowish hue of the skin, swollen face and deep black circles around eyes. In some cases the onset is sudden with lassitude, weakness and dyspnea. Treatment, fresh air, iron and arsenic, with aloin, strychnin and belladonna for the constipation.

Adjourned.

H. Q. WHITE, Secretary.

WHITLEY COUNTY

The regular meeting of the Whitley County Medical Society was held in Columbia City, Tuesday, September 6. The following papers were presented, Puerperal Sepsis, Dr. Budd Van Sweringen, Fort Wayne; Puerperal Eclampsia, Dr. E. V. Nolt; Professionalism, Dr. Jessie Briggs, Chubbusco. Drs. F. M. Magers, of Chubbusco, and E. Z. Eberhard, of South Whitley, also presented papers.

ALICE B. WILLIAMS, Secretary.

BOOK REVIEWS

MEDICAL ELECTRICITY AND ROENTGEN RAYS. By Sinclair Tousey, A.M., M.D., Consulting Surgeon to St. Bartholomew's Clinic, New York City. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$7 net; half morocco, \$8.50 net.

Now that the use of electricity as applied to medicine, or as the author aptly terms it, "medical electricity," has been placed on a rational basis, it is particularly fitting that a volume covering such application should be submitted to the medical public.

Following an introductory chapter on general considerations, the author takes up both static and dynamic electricity, then electricity occurring in animals and plants, and following these he gives a division to the physiologic effects of electricity.

A chapter on electro-pathology is interesting, as it treats of various pathologic lesions caused by electric discharges. A short description of various kinds of

electrodes precedes a division of electro-diagnosis. In this are given a series of plates illustrating the various motor points on the surface of the body. Two short divisions on ionic medication and examples of static and dynamic electricity are followed by a chapter of practical importance, being an exposition of electricity in diseases of the nervous system. High-frequency currents, phototherapy and a comprehensive and detailed account of the x-ray are given. The treatment of disease by the x-ray or Roentgenotherapy, with a chapter on Radium, complete the volume.

The book deserves to become much used, both by students in electrotherapeutics, and by those in practice, who, lacking adequate knowledge in medical electricity, are handicapped in the intelligent application of this form of therapy.

THE ELEMENTS OF THE SCIENCE OF NUTRITION. By Graham Lusk, Ph.D., M.A., F.R.S. (Edin.), Professor of Physiology at Cornell Medical School, New York. Second Edition, Revised. Octavo of 402 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$3.00 net.

This excellent monograph has in its revision profited by a richness of recent literature seldom available to a medical subject. And what redounds more to the credit of the author is the fairness with which he proffers the literature on both sides of a question. It has seldom been our privilege to review a work which abounds so thoroughly in a review of the best literature attainable, yet thoroughly germane and specific in character.

So little can be definitely proven experimentally in the fields of metabolism and physiological chemistry that it is small wonder that the vast amount of experimental work being done should yield such widely-varying results.

The author deplors the fact that so little of this laboratory work undertaken to explain the inner metabolic processes in disease has emanated from the United States, while in Germany the subject has received attention for twenty years. Indeed he marvels that in this country where so much attention has been given to the different food values in infant feeding, so little consideration has been directed to the scientific diet in fevers.

Among the most interesting chapters, if indeed any comparison could be drawn in so full a treatise, are those on the metabolism in starvation, diabetes and fever.

An occasional typographical error appears, as on p. 269.

PREPARATORY AND AFTER TREATMENT IN OPERATIVE CASES. By Herman A. Hanbold, M.D., Clinical Professor of Surgery, New York University; Visiting Surgeon, Harlem and New York Red Cross Hospitals, New York, etc. Pp. 650, with 429 illustrations. Cloth. Price \$6. D. Appleton & Co., New York and London, 1910.

The field for such treatises as this and the absolute need thereof in the present era of well-advanced surgical therapy are so palpable as to require no elaboration. And aside from the desire to disseminate correct knowledge on the subject itself for the sake of scientific achievement, the author's expressed desire to bring about a more desirable financial relation between the surgeon and physician than the commer-

cial spirit that all too commonly obtains today, is most commendable. Dr. Haubold takes the rational stand that by educating the family physician to a high degree of skill in the ante- and post-operative care of the surgical case, there will come about a public understanding of the true worth of the family physician and his just remuneration will be considered a matter of course.

The work itself covers the ground very fully, beginning with the recording of the history and following through the preparation of the patient, operating-room, surgeon, assistants, nurses, dressings, suture materials, instruments, to the completion of the operation and the post-operative care. Complications are considered in all possible phases. The latter part of the work is devoted to operations on special parts of the body and the variations in the preparatory and after treatment indicated therein.

One of the commendable positions held by the author is that in regard to the wearing of rubber gloves by the operator. It is well known that a solution of continuity of a glove worn for some time is a menace to asepsis, for it allows of the forcible expulsion into the wound of bacteria-laden perspiration and macerated epithelial elements that had better be combated by frequent cleansing of the operator's hands during his work.

Exception should be taken to the author's statement that "boiling destroys all bacteria and spores in a few minutes," for there are certain spores that are known to resist prolonged boiling. Likewise it has not yet been proven that mercuric cyanid is a more powerful antiseptic than bichlorid of mercury.

In the description of methods of preparing catgut, no mention whatever is made of the Bartlett process for iodized gut, which is very popular just now. Also nothing is said on the subject of sutureless skin coaptation, as by clamps or adhesive straps.

Several grammatical and typographical errors were noted.

THE PATHOLOGY OF THE LIVING AND OTHER ESSAYS. By B. G. A. Moynihan, M.S. (London), F.R.C.S., Professor of Clinical Surgery at the University of Leeds, England. Philadelphia and London, 1910: W. B. Saunders Company. Cloth, \$2.00, net.

In this small volume we find a number of essays, each deserving close and careful study. They include addresses on the "Pathology of the Living," "Inaugural Symptoms," "Gastro-Enterostomy and After," the "Early Diagnosis and Treatment of Cancer of the Stomach," "Remarks Upon the Surgery of the Common Bile-Duct," the "Operative Treatment of Obstructive Jaundice and the Proper Selection of Cases," "On the Violation of Courvoisiers Law," "The Mimicry of Malignant Diseases in the Large Intestine" and the "Surgical Treatment of Cancer of the Sigmoid Flexure and Rectum with Especial Reference to the Principles to be Observed."

The author prefaces his work thus: "The time has come when the surgeon must cast off some of the shackles by which he has been fettered so many years. When research into the conditions within the abdomen has been conducted during the course of an operation, the fruits have been judged by the standards set up by the disclosures of the post-mortem room: No recognition has been accorded to the truth that in

almost every particular the value of evidence obtained from the living outweighs that which is disclosed on the post-mortem table."

If this collection of papers encourages the more careful observation of pathologic changes discoverable in the conduct of an abdominal operation, or any other for that matter, and the association with such structural change of the clinical manifestations, it will have gone far to serve its author's purpose.

SURGICAL AFTER-TREATMENT. By L. R. G. Crandon, A.M., M.D., Assistant in Surgery at Harvard Medical School. Philadelphia and London, 1910: W. B. Saunders Company. Cloth, \$6.00, net; half Morocco, \$7.50, net.

The subject matter in this extensive volume covers the after-treatment in all classes of surgical cases, and is written particularly for house surgeons in hospitals and general practitioners in communities which are not surgical centers.

Every procedure advised has been thoroughly tested by practice and will furnish a safe and adequate basis on which the practitioner may develop his own methods. Careful thought has been given to all kinds of post operative complications, each of which is considered fully and comprehensively.

A very complete section on therapeutic immunization and vaccine therapy by Dr. Geo. P. Sanborn former assistant in Sir A. E. Wright's laboratory, adds much and brings this volume to a thoroughly modern standard.

The book is not profusely illustrated, but enough plates are inserted to demonstrate the subject matter of the text clearly.

With such a work at hand the intelligent care of post-operative cases and the ability to meet almost any complication should be more evident than it unfortunately has been in the past.

HOOKWORM DISEASE. By George Dock, M.D., Professor of Theory and Practice of Medicine Tulane University, and Chas. C. Bass, M.D., Instructor of Clinical Microscopy and Clinical Medicine Tulane University. St. Louis, 1910: C. V. Mosby Book Co.

Fittingly dedicated to Dr. Charles Wardell Stiles, this small but complete treatise on hookworm disease comes from those who have been actively working in infected districts and have given much time and closest attention to the morphology of the parasite; to the symptoms, diagnosis and treatment of this widespread and but recently discovered American malady.

The opening chapter gives the definition and an historical sketch of hookworm disease. Following this is a division on the distribution and economic importance of the disease. The zoologic features with the modes of infection of the parasite precede chapters on the pathologic anatomy, pathology, symptomatology, diagnosis, prognosis, prophylaxis and treatment.

Appended is a list of references to the best literature available. The illustrations are particularly clear and give one an accurate idea of the differential points in the morphology of the parasite and in the pathology of the disease.

The book will be received eagerly by medical men as a knowledge of uncinariasis is becoming most essential not only to those practicing in the southern states, but to those in other localities from which isolated cases are being reported.

A TEXT-BOOK OF PHARMACOLOGY AND THERAPEUTICS; OR THE ACTION OF DRUGS IN HEALTH AND DISEASE. By Arthur R. Cushny, M.A., M.D., F.R.S., Professor of Pharmacology in the University of London; Professor of *Materia Medica* and Therapeutics in the University of Michigan. Cloth, \$3.75, net. Philadelphia and New York, 1910: Lea & Febiger.

Having first appeared at a time when the facts, that the real action of drugs is knowable and that therapeutics is a rational science, were beginning to meet general acceptance, this work has continued to hold its place through the several revisions and editions as an authoritative treatise on the action of drugs.

Recent extensive study of many individual drugs has enabled the author to make more definite statements as to their action; for instance, the sections on adrenalin and ergot are altered and enlarged thereby, as is that given to digitalis, on the action of which much light has been thrown by the new methods of clinical examination. Research in protozoal infections has suggested new points of view in regard to specific remedies, such as arsenic and mercury. A short section is given to antitoxin.

The usual convenient arrangement that has characterized former editions continues in this, also the bibliography at the end of each division contributory to further study on the individual subjects.

With the tendency of modern therapeutics to abandon many untrustworthy and feeble remedies and to depend on those of which the efficacy and power are beyond question, such a volume is almost indispensable to the man who is administering drugs understandingly.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By Lewis A. Stimson, B.A., M.D., LL.D., Professor of Surgery in Cornell University Medical College, New York, etc. Sixth edition, revised and enlarged, with 361 illustrations and 65 plates in monotint. New York and Philadelphia, 1910: Lea & Febiger. Pp. 876. Cloth. Price, \$5.00, net.

As outlined in the preface to this edition to Dr. Stimson's very excellent work, the additions consist mainly of those concerning injuries of the small bones of the carpus and tarsus, and midcarpal fracture-dislocations. Additions have also been made to the sections on fractures of the floor of the acetabulum, the internal epicondyle of the femur and backward dislocation of the lower jaw. Other important additions pertain to treatment.

Several new skiagrams and new cuts have been added or substituted. The author is to be congratulated on the excellence of the skiagrams and it is to be regretted that some have been inserted where they do not belong.

Dr. Stimson adopts a very conservative attitude concerning the operative treatment of fractures so heartily endorsed by Lane of England and so little encouraged by the Germans. The statement that anesthesia for the reduction of Colles' fracture is occasionally required would better be worded that it should seldom be omitted, for with the aid of it there would be eliminated many of the deformed wrists that we now see as the result of poorly reduced fractures of the lower end of the radius. No mention is made in the treatment of this fracture of adopting measures to prevent the slumping of the ulnar eminence.

On the whole the work is very complete and thorough and abounds in a richness of bibliography that seldom obtains in a work of this sort.

ANATOMY, DESCRIPTIVE AND APPLIED. By Henry Gray, F.R.S., late Lecturer on Anatomy at St. George's Hospital, London. New (18th) edition, thoroughly revised, by Edward Anthony Spitzka, M.D., Professor of Anatomy in the Jefferson Medical College of Philadelphia. Philadelphia and New York, 1910: Lea & Febiger. Price, with illustrations in colors, cloth, \$6.00, net; leather, \$7.00, net.

The continued popularity and usefulness of Gray's Anatomy is evidenced by the repeated revisions and editions that have appeared, the present one being the eighteenth. Perhaps no medical text-book is more generally used than is this volume.

The general plan of the book is the same as in former editions. However, there are supplied such facts and views as the advances in the science of anatomy have made necessary. There is a general tendency to clear any obscure or ambiguous passages in the text and to curtail descriptions of undue length.

By condensation and the omission of duplications, notwithstanding the increased aggregate of knowledge, there is a considerable reduction in the number of pages. This is an advantage in a book of this size.

The title "Surgical Anatomy" has been replaced by the broader term "Applied Anatomy" and under this heading many important medical considerations are now discussed.

The wise selection of so able and well-known an authority to revise, re-edit and supplement this new edition, does credit to the publishers. The result of careful, painstaking revision, with all the skill in bookmaker's art, combine to place this volume where it has been in former years, in the foremost ranks of medical text-books.

LIPPINCOTT'S NEW MEDICAL DICTIONARY. A Vocabulary of the Terms Used in Medicine and the Allied Sciences, with their Pronunciation, Etymology and Signification. By Henry W. Cottell, A.M., M.D. Illustrated. Philadelphia and London: J. B. Lippincott Company. Leather, \$5.00.

For the medical student, the practitioner of medicine, the laboratory worker and whoever has occasion to use a medical dictionary, the author has attempted to furnish a volume which shall attain the ideals of the user in regard to thoroughness, accuracy, perspective and proportion.

The basis for this undertaking was furnished by a medical dictionary, which was the careful and scholarly work of the late John Ashhurst, M.D., George Piersol, M.D., and Prof. Joseph P. Remington.

In order to save space many words of more or less self-evident meaning, which do not warrant taking up the space required for full definition, are entered without definition; such words are adjectives, adverbs, participles and derivatives formed by adding the common English suffixes. Also words having a common etymological element are usually grouped together. When an important word occurs in such a list it is treated in full in its regular vocabulary space.

Throughout the book are numerous small illustrations, which are of service in the interpretation of the definitions. No large or colored plates are contained in the volume.

Thumb indexed, with type clear and errata few, and all made compact into a volume of a size most convenient to handle, this book is a credit to its publisher as well as its author.

THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

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OPHTHALMIA NEONATORUM*

GEORGE F. KEIPER, A.M., M.D.

LAFAYETTE, IND.

Notwithstanding nearly thirty years have elapsed since Professor Carl Credé announced his simple preventive, ophthalmia neonatorum continues to blind babies and renders the great majority of those so afflicted public charges.

We have in this country about 50,000 blind persons, of whom one-fourth are blind as the result of this disease. The reports for 1907 show that 31 per cent. of all children admitted to the New York Institution for the Blind are there because of this disease. Of all admitted to the Maryland School, 30 per cent.; to the Pennsylvania School, 33.3 per cent.; to the Missouri School, 31.5 per cent.; to the Massachusetts School, 30 per cent.; to the Colorado School, 42.8 per cent.; to the Ontario School, 21.74 per cent. In Pennsylvania for the years 1900 to 1907 the percentage ran from 23 to 50, averaging per year, for the period, 33.36 per cent. Abroad the figures are no better. The blind asylums of Holland, Austria, Germany and Denmark show an average of 40 per cent., according to the figures of Reinhard. In the Sheffield School the figures, according to Simeon Snell, show an average of 41.1 per cent. The publication of these figures before the British Medical Association caused that great association to take action looking to the eradication of the disease. Our own American Medical Association has taken similar action and in the last three years considerable work has been done; but there is still much to be done in educating public sentiment and, as the result of that education, placing on the statute books such laws as ought to be

there and thus, if possible, stamp out this disease. Therefore, let us direct our attention to the disease and take it up in a regular way and order.

DEFINITION.

Ophthalmia Neonatorum, the purulent sore eyes of new born babies, is an infectious, contagious disease accompanied with the secretion of pus from between the eyelids, manifesting itself usually from a few hours to a few days after the birth of the child and, when left untreated, results in great damage to, if not the destruction of, the child's eyesight.

HISTORICAL.

The disease is as old as medicine—at least, Aetius, who wrote about the year 500, mentions it in his system of medicine, which system embraces sixteen volumes.

PREVALENCE.

It is found the world over. Hausmann in 1882 compiled some tables as to its prevalence in lying-in hospitals, and found of all live births 4.05 per cent. showed the disease. In our own country the average is 1 to 2 per cent of all live births.

ETIOLOGY.

To this very day the laity ascribe all kind of causes to account for the disease, as: exposing the child's eyes to the light too soon after birth, to cold, to heat, to the condition of the bowels, to getting into the eyes of the child some of the material used in cleansing the baby, etc., etc., etc.

The true cause was a long time being found out, and when ascertained was long delayed the recognition that it deserved. In 1750 S. T. Quellmalz discovered the cause to be in the leucorrheal discharge of the mother at the birth of the child. That this discovery was not accepted is shown by the writings of A. Edmonson who, in 1806, wrote a "Treatise on the Varieties and Consequences of Ophthalmia," in which he

* Read before the Indiana State Medical Association at Fort Wayne, Sept. 28, 1910.

describes the cause to be "a loaded and oppressive condition of the bowels" (Stephenson).

In 1807 Dr. Benjamin Gibson, of Manchester, wrote his views as follows: "It is most probable, however, that the usual cause of this disease is furnished by a neighboring organ. The following circumstances suggested it to me. I was consulted some time ago in the case of Mrs. C's child, who had lost both eyes from an attack of this disease. After some days attendance Mrs. C called my attention to a complaint which had existed previous to her marriage and had continued during her pregnancy and up to the present time, and this complaint was fluor albus. The coincidence of a similar discharge in the two cases attracted my attention, and it occurred to me that the eyes of the child, during their passage through a vagina where such a discharge was secreting might receive the disease in question by contact between the fluid and the eyelids. Since that period, where the child has been affected with the puriform ophthalmia, I have been as particular in my enquiries as the delicate nature of the case will allow, respecting the state of the mother's organs at the time of delivery, and have found, with little exception, that fluor albus existed" (*Edinburgh Medical and Surgical Journal*, 1807).

That the disease might be due to venereal origin, wrote Dr. Thomas Morrison of Dublin: he did not discriminate between gonorrhea and syphilis, however. Vetch in 1820 inoculated an urethra with pus taken from a baby's eyes affected with this disease and produced gonorrhea within thirty-six hours. Pauli, of Landau, in 1854 took pus from a case of ophthalmia neonatorum and introduced it into the vagina of a prostitute and gonorrhea resulted.

It remained for Neisser in 1879 to announce the discovery of the presence of the gonococcus in the secretions of the eyes of children affected thus, and also to find it in the eyes of adults with gonorrheal ophthalmia, and from the discharges of the urethra and vagina affected with the clap.

It soon became evident that the gonococcus was not the sole cause. Kroner in a series of ninety-two cases of ophthalmia neonatorum found the germ in 68.5 per cent. of the cases. He further inoculated the non-gonorrheal discharge into the eyes of five adult blind persons and failed to produce the disease. Sydney Stephenson, in an exhaustive inquiry into this phase of the subject, sums up the experience of forty-one observers and finds that in 1,658 cases of ophthalmia neonatorum 67.14 per cent. showed the gonococcus, while 32.68 per cent. showed other germs, and from

this concludes that the vaginal discharge was capable of producing the disease. Stephenson's private experience is as follows: Out of 171 cases he found the gonococcus in 106, i. e. 61.98 per cent. Totalling his with the others and casting up the results, we find a total of 1,829 cases in which 64.56 per cent. showed the gonococci. In the severe cases it is comparatively seldom that the gonococci are not found. Hence a prognosis may be established by a bacteriologic examination.

My experience shows a percentage of 71 as to the presence of the gonococci. O. N. Walker, in an article in the *Ophthalmoscope* for February, 1910, states that in the Ophthalmia Neonatorum department of St. Paul's Hospital, Liverpool, that germ was found present in 71 per cent. of a series of 136 cases.

Investigations have been carried out to find what per cent. of pregnant women have the gonococci. Leopold and Wessell (*Arch. f. Gynecol.*, xxiv, 1884) made such examination on eighteen pregnant women and found gonococci in the vagina of one. Of the babies born only one developed the disease and that baby was born of the woman who showed the gonococci. Sanger (*Verhandlungen der deutsch. Gess. f. Gynecol.*, 1886) found that of 389 pregnant women, 100 had a purulent discharge and, further, forty babies born of these women had ophthalmia neonatorum. Stiinbuchel (*Wiener klin. Wchnschr.*, 1892, Nov. 21-22) found seventy out of 328 pregnant women to have a blennorrhoea and of these twenty-two showed the gonococci. Of the children born of the diseased women, three had purulent ophthalmia.

As intimated, other bacteria may be the cause of the disease. Those that have been found have been the pneumococcus, bacterium coli, Koch-Weeks bacillus, Morax-Axenfeld diplobacillus, Klebs-Loeffler bacillus, pneumobacillus, pyococci, streptococci, streptobacilli, micrococcus luteus and pyocyanens. Any of these alone, or in combination, produces one-third of the cases of ophthalmia neonatorum. To be absolutely sure there must not only be a bacteriologic examination but it must be repeated several times to establish the diagnosis.

As to the cause of corneal damage: A collective investigation made by Stephenson, embracing 494 cases, shows the gonococcus to be the evident cause of 29.74 per cent., and other bacteria, 6.006 per cent.; and according to the investigations of this same author, 65 per cent. of all cases will be due to the gonococcus, 10 per cent. to the pneumococcus, 5 per cent. to the bacillus coli, 5 per

cent. to the other pathogenic bacteria and 15 per cent. will not show anything.

The infection may take place, as follows: Before the head is born, (1) intrauterine, *a.* before the rupture of the membranes, *b.* after rupture of the membranes; (2) extrauterine, *a.* in the passage of the head through the vagina. After the head is born, (1) immediately, (2) after several days.

It must be admitted that, since the baby's eyes are closed during the passage through the birth canal, infection before the birth of the head is the unusual occurrence. However, at least three cases are on record where children delivered by Cesarean section developed ophthalmia neonatorum afterward. As late as 1903 Collingwood reported such a case to the Obstetrical Society of London, and the next year Robert Jardine (*Trans. Edinburgh Obstetrical Soc.*) reported a case of the delivery of a boy thus who, within three hours after birth, showed pus streaming from both eyes. A number of observers have reported cases where children were born with the cornea either destroyed or badly damaged, notably DeMours, Compton, Rivaud-Landrau, Würdemann and Van Fleet. In fact, to date, ninety cases of such origin have been collected from the literature.

Investigations show that the usual mode of infection is immediately after the birth of the head, as the eyes of 75 per cent. of all babies just born are sterile. This is borne out by the efforts of Korn (*Arch. f. Gynäk.*, 1887) to, as far as possible, sterilize the vagina before birth by irrigations of sublimate solution, and immediately on the birth of the head to cleanse the eyelids and surrounding parts with cotton and plain water. When the child was completely born, and before the cord was severed, the face and head were washed and the child's hands kept from its face. But three cases developed the disease out of 1,000 births treated thus. A similar practice carried out by Snell in 2,000 cases resulted in every child avoiding the disease (*Lancet*, 1888).

The period of incubation of the germs involved lends belief to the idea that the inoculation takes place after birth in the great majority of the cases. The collective observations of Cunier, Königstein, v. Hecker, Upperkamp, Francisco, Köstlin, E. T. Collins and Haupt, covering 739 cases, show that 63 per cent. incubated the disease in from one to four days; 31.7 per cent., in from four to eight days, and after eight days, 5.3 per cent. Stephenson's own observations are as follows: If gonorrheal in origin, 80 per cent., one to four days; 7.3 per cent., four to eight days, and 12.19 per cent. after eight days. If non-spe-

cific, 57.14 per cent., one to four days; 31.84 per cent., four to eight days, and 5.77 per cent. after eight days.

That infection may take place during the passage of the head through the birth canal is shown by the classic case of Wintersteiner (*Wiener klin. Wchschr.*, 1904) in which a baby (born without instruments) with unilateral facial paralysis and inability to close the eye on the side affected, developed the disease in that eye but not in the other eye.

A tight perineum pressing on the eyelids and depositing infection between them is regarded by some as a cause. It may happen that the mother does not show any vaginal discharge and yet the baby shows sore eyes. In such a case the glands of Bartholin or the ducts of Skene may produce the infection as in two cases reported by Finger. In cases developing after four days, infection may be caused by the child's fingers or through the nurse, who may be gonorrheal. An epidemic of this disease is reported by Max Knies (1896) following in the wake of a midwife, herself having gonorrheal vaginitis. Prince A. Morrow (*N. Y. Med. Jour.*, and *Phila. Med. Jour.*, 1903) writes as follows: "All investigators who have had occasion to examine the lochial discharge unite in attesting that immediately after confinement, even as early as the second day, there is an extraordinary multiplication of the gonococci. (The lochial fluid is an excellent culture medium, and the gonococci are found in almost pure culture.) This too may account for the late infections.

Illegitimate children are more frequently affected with ophthalmia neonatorum than the children of legitimate birth, the proportion being three to one, as reported by Timgren of Helsingfors, who analyzed 4,155 cases of birth in thirteen years. The figures of Widmark, as well as those of A. Heims, show the proportion to be as two to one. Pfluger's figures show even a larger proportion—nine to one. The city furnishes twice as many cases as the country and the larger the city, the greater the proportion (Cohn).

According to certain observers, Alt, Emmert, Haussman, Hirschberg, v. Hecker, Wengler, Haase, Carns, Guersant and C. Emmert, May has the most cases and December the least. Fuchs is inclined to the belief that the season of the year has nothing to do with the increase or diminution of the disease.

SYMPTOMS

As it takes from 24 to 48 hours for the gonococci to manifest their presence, the symptoms are hardly to be expected before that time. The

largest number of cases manifest themselves on the third, fourth and fifth days after birth, as shown by the following figures of v. Hecker and Uppercamp.

V. Hecker's (Arch. f. Gynec. 1882)	Upperkamp's (Dissertation, 1885)
1st day..... 1 case	1st day 16 cases
2nd day..... 7 cases	2nd day..... 38 cases
3rd day..... 19 cases	3rd day..... 80 cases
4th day..... 27 cases	4th day..... 58 cases
5th day..... 23 cases	5th day..... 54 cases
6th day..... 14 cases	6th day..... 29 cases
7th day..... 9 cases	7th day..... 20 cases
	8th day..... 15 cases
100 cases	9th day..... 5 cases
	10th day..... 6 cases
	After 10th day.. 7 cases
	328 cases

Usually but one eye is affected at first, but the other becomes affected soon after.

As the oculist seldom sees these cases until the disease is well established, it is wise for the obstetrician to look for what is called Billard's sign. This is a narrow red line running transversely across the center of the upper eyelid. The next symptom appearing is a puffiness of the eyelids with the edges red and prone to stick together, and when separated thin pus exudes: later on the swelling increases and the pus becomes thick and yellow, although occasionally it has a greenish hue. When the baby cries, the upper lid, which now overhangs the lower lid, tends to evert and this makes it easy to evert it fully for the application of remedies. The everted eyelids show the conjunctiva to be thickened and red like beefsteak, or to use the expression of another, "like an everted horse's rectum, to employ a simile that is more apt than elegant." The ocular conjunctiva is red, but not as a rule chemotic, and in this respect it is in contrast to gonorrheal ophthalmia in the adult, where it is the rule for it to show chemosis.

If the case is neglected, ulceration of the cornea develops. In sickly babies, perforation is liable to take place in from 36 to 48 hours, so destructive is the disease. When perforation takes place the iris prolapses and the beginnings of staphyloma are established. I saw a case in the last two years which developed anterior capsular cataract of very small dimensions.

Complications may occur in distant parts of the body. It has fallen to my lot to see at least two cases of intercurrent arthritis, one of the ankle and one of the knee joint. Inflammation of the preauricular gland has been noted. Suiker (*Annals of Ophthalmology*, 1905,) reported a case of infection of the ethmoidal cells due to this

disease. E. W. Stevens (*Ophthalmic Record*, 1905) reported a case of fatal septicemia due to ophthalmia neonatorum, the contributing cause being endocarditis. The baby died 17 days after the onset of the ophthalmia which was gonorrheal in origin. If left to itself the disease runs its course in six weeks to two months, the palpebral conjunctiva becoming cicatrized.

HISTOLOGY

The histology is the same as in any other case of conjunctivitis, only more severe and, with the exception that the gonococcus is the center usually around which the disease centers its histology.

DIAGNOSIS

The diagnosis is made by observation of the symptoms outlined above and the discovery in the secretions from the eyes of the gonococcus or other pus-producing bacteria. The only other disease that is liable to be confounded with it is abscess of the lachrymal sac. This is rare and is not noticed until several days have elapsed after birth. The eyelids are not swollen and the baby can open the eyes at will. When pressure is made at the inner canthus over the internal palpebral ligament, pus will exude.

To make the examination of the eyes, it will take two persons, the doctor and the nurse, who sit facing each other, the baby's head being held firmly between the doctor's knees. Of course, the doctor will protect his clothing by placing over his knees a piece of rubber sheeting or a towel. The more the baby cries, the easier it is to evert the eyelids. To examine the cornea, which is necessary, a retractor is needed. If one is not at hand, a very good one can be made by bending the curved end of a hairpin.

PROGNOSIS

The prognosis depends on several factors: (1) the bacterial cause, (2) the condition of the cornea, (3) the nutrition of the baby, (4) the stage of the disease (Stephenson modified).

1. *The Bacterial Cause*.—Cases showing the gonococcus, no matter how mild, are to be seriously regarded. The presence of other bacteria seems to increase its virulence—the streptococci, according to Chartres (1896, Thesi de Bordeaux) and according to Chibret (*Rev. gen. d'ophtalmologie*, 1894) the staphylococci with the streptococci. So we cannot say that the corneal complications are due to the gonococcus alone, or that if the gonococcus is present serious results are likely to the cornea.

2. *The Condition of the Cornea.*—The blindness following the disease is due to ulceration of the cornea. If the physician is called early enough, and finds the cornea clear, the prognosis had better be guarded, as I have seen the cornea ulcerate in spite of all orthodox treatment accorded this dreadful disease. Others report the same observations, as Woods (*Annals of Ophthalmology and Otology*, 1894). Friedenwald (*Med. News*, 1895), Würdemann (*Annals of Ophthalmology*, 1896). However, we may say that with a clear cornea to start with we ought in the great majority of cases to keep it clear.

3. *The Physical Condition of the Baby* will be a large factor in determining the prognosis. The baby badly nourished and inheriting the diseases transmitted from parent to offspring, such as syphilis or its manifestation in the third or fourth generation, scrofula, is the one most likely to show corneal complications which may lead to blindness or serious loss of vision. Sydney Stephenson insists on systematic weighings of the baby afflicted thus, feeling that if the "weight of the baby at the first visit exceeds or does not fall below the average for his age, that he seldom has any misgivings as to the course of the ophthalmia." The baby nourished by its mother has a better prospect than the bottle-fed baby for a clear cornea. A. N. Walker (*Ophthalmoscope*, February, 1910) noted that out of eleven babies blind with ophthalmia neonatorum four were bottle-fed. In this connection Würdemann records a case (*Annals of Ophthalmology*, 1896) where ophthalmia neonatorum almost recovered from was again lighted up by an attack of gastritis in the mother.

4. *The Stage of the Disease* is a determining factor because the earlier the baby is seen the better is the prognosis likely to be.

Taking all the above factors into consideration, we may say that 95 per cent. of all eyes ought to be saved. This is quite in contrast with gonorrheal ophthalmia in the adult, where many more eyes are lost in spite of all treatment. Greeff (*Therap. d. Gegen.*, No. 1, 1908) claims the disease curable in every case. If he means symptomatically, he is correct.

The prognosis for a favorable issue is heightened by putting both mother and child in a hospital for treatment. A case which I recently treated demonstrates this. We had two recurrences with home treatment. A stay in the hospital subsequently resulted in a prompt subsidence of the symptoms with the eyes possessing good vision though the cornea were clouded below the pupil.

TREATMENT

Two points are to be observed: (1) cleanliness; (2) destruction of the offending germs and resultant inflammation.

The first item means that the inflamed eyes are to be cleansed of the pus every half hour during the continuance of the disease. While this is being done the eyes may, at the same time and with the same hot water, be bathed thoroughly. The water should be as hot as the back of the hand will stand, and should be applied with soft cloths which should be burned immediately after use. To get rid of the pus from between the eyelids and eyeball a soft rubber syringe tip may be gently insinuated between the eyelids and it may be washed out thus. The utmost gentleness must attend this manipulation.

The question to decide is between hot and cold applications in such cases as these. This can be readily settled by attention to the principles of surgery. Cold retards and heat promotes diapedesis. The latter is what we want with the products of inflammation. This is proved by such statistics as those of Dr. Myles Standish (*Jour. A. M. A.*, Dec. 17, 1904) which show that out of seventeen cases admitted with clear cornea, and which were treated with iced applications, ten were discharged without corneal lesions, i. e., 59 per cent. successful. During the same period thirty-eight cases were treated with hot applications and twenty-eight went out with clear cornea, i. e., 74 per cent., or a difference of 15 per cent. in favor of the hot applications. E. L. Meyerhoff (*New York Med. Jour.*, Nov. 30, 1905) reported two cases in which cold was used on the eyes and cloudiness of the cornea resulted, but which were cleared up by changing to the hot applications.

The second item finds its sheet anchor in nitrate of silver. This is to be applied as a 2 per cent. solution to the everted eyelids at least once daily and the excess washed off with either saline solution or with plain water. Its application may be attended with some bleeding of the conjunctiva, which is not a disadvantage. It seems to help the disease to procure some bleeding from the everted conjunctiva thus as the blood seems to wash the gonococci or the other germs causing the disease out of the engorged tissues.

Long before the ultimate cause was discovered, nitrate of silver was used empirically, and to this day its value is so well established that in face of the legion of the newer preparations of the silver salts, it is indispensable. Of the latter, the principal ones are protargol, argyrol and collargol. The investigations of Derby indicate

that none of them approaches nitrate of silver in efficiency. Nitrate of silver, in from $\frac{1}{2}$ to 2 per cent. solutions, will kill *Staphylococcus pyogenes aureus* in from 2 to 5 minutes; protargol, in 2 to 4 per cent. solutions, kills it in 3 to 5 minutes; collargol is comparatively weak, and from argyrol of .10, .25 and 50 per cent. solutions, growths were obtained after two hours. I have used protargol and argyrol ever since they were introduced, but as adjuvants to the nitrate of silver treatment.

Drs. Myles Standish of Boston and Bruns of New Orleans are advocates of very strong solutions of argyrol, actually immersing the eye therein, and apparently the results have been good. Standish reports the following results as to silver nitrate, protargol and argyrol and their effect on the ultimate clearness of the cornea (*Trans. Am. Ophthalmological Society*):

Remedy.	Number Cases Treated	Number Corneal Infections.	Per cent of Corneal Infections.
Silver Nitrate	50	3	6.00
Protargol	150	3	2.00
Argyrol	201	4	1.99

When argyrol is used in these strong solutions we must not lose sight of its mechanical action in actually lifting the pus out of the cul-de-sacs. This may account for the good results obtained.

If corneal complications are present, atropin sulphate is indicated in a $\frac{1}{2}$ per cent. solution, used thrice daily until no longer needed. It is the opinion of some that eserine should replace atropin, based on their experience in the use of this drug in keratomalacia. If the ulcer becomes well marked it had better be cauterized, either with the actual or the galvano cautery. The baby must be anesthetized for this procedure. The better fed and stronger the baby the better it will respond to treatment. Hence attention to its dietary is also necessary. Breast-fed babies do better than bottle-fed ones.

Warn all persons in contact with the infant of the exceedingly dangerous character of the disease, and that care must be used not to transmit the disease to others. All cloths, cotton and dressings must be burned after use.

Never poultice these eyes or any other eyes, for a poultice is an abomination in ophthalmology.

PREVENTION

But better than treatment, with its uncertainties, is prevention. The writings of Benjamin Gibson of Edinburgh, produced in 1807, sound as if written for today, for he says: "(1) Remove the disease, if possible, in the mother

during pregnancy; (2) if that cannot be accomplished, remove artificially as much of the discharge as possible from the vagina at the time of delivery; (3) at all events pay particular attention to the eyes of the child by washing them immediately after delivery with a liquid calculated to remove the offending matter or to prevent its noxious action" (*Edinburgh Med. and Surg. Jour.*, 1807. Quoted by Stephenson, *Ophthalmia Neonatorum*). This was written long before it was known that the gonococcus or any other germ was the cause of the disease. The history of attempts at prevention from that time to that of Credé is very interesting.

Credé, professor of obstetrics and gynecology in the University of Leipsic, and director of the Maternity Hospital of the University, in 1880, 1881 and 1882 published a series of epoch-making papers wherein he systematized a means of preventing the dreaded disease. The method is described in his own words as follows: "The eyelids were gently separated by an assistant and by means of a glass rod a single drop of the solution was placed in each eye. For 24 hours after the application the eyes were cooled by means of a linen fold, soaked in salicylic acid (2:100) laid over them."

The percentage of babies contracting the disease rapidly fell with the adoption of his method. We are told that in 1874 there were in his hospital 323 births with forty-five cases of ophthalmia neonatorum, i. e. 13.6 per cent.; and in 1882 with 260 cases in which the method was used but one case developed, i. e., .5 per cent. From 1880 to 1883 the percentage ranged from .49 per cent. to zero. In three years 1,160 children were born alive and but one, or at most two cases, showed the disease. Lucien Howe (*N. Y. State Jour. of Med.*, 1906) collected statistics of 1,776 cases having no prophylactic treatment and 9.2 per cent. developed the disease, and of 24,724 treated by the Credé method only .65 per cent. developed the disease.

The method now used consists in simply applying a 1 per cent. solution of the nitrate of silver and doing nothing else afterwards. This method has been used the world over and with uniform results, and thus has justified itself time and time again. It is certainly simple. Objections have been made to its use because, in a rare case now and then, severe inflammation has followed. In these instances the solution has been found to possess a distinct acid reaction. The solution should be neutral or slightly acid to litmus paper. Then again, some have essayed to drop the solution into the eyes every few hours for several days, using a medicine dropper. The instrument

to use is a glass rod, or a dropper bottle like Stearns', and it should be used but once for each eye. Be careful that the stirring rod is like what the chemist uses in daily routine in mixing liquids in the laboratory.

Occasionally, even after such use, a mild conjunctivitis is set up. But as Feilehenfeld says (*Deutsch. med. Wchnschr.*, Dec. 30, 1909 abstr. in *Jour. A. M. A.*, February 5): "Inflammation developing after the instillation of silver nitrate should not be ascribed to irritation from the drug but should compel immediate microscopic examination of the secretions so as not to overlook already existing gonococcus infection. A single instillation of the nitrate is unable to abort this infection; it should be suspected if delivery has been unusually prolonged."

That these cases may be made to disappear, a campaign of education is necessary. We should be frank in this matter and warn, by discussion and by judicious laws upon our statute books, the public that the disease is imminent to any child, so long as children are born in the world. Of course, we only expect one or two children out of a hundred to contract it, but the economy of things is such that we are not so much concerned with the safety of the ninety-nine as we are with the danger and damage that is liable to come to the one. In our city we have a swimming pool to protect the lives of boys who formerly used the river in which to bathe and in which a boy occasionally lost his life by drowning. In other words, it is put there not particularly for the boys who do not drown but for the safety of that occasional boy who is in danger of drowning. To-day we are giving a lot of time, and rightly too, to the cure and prevention of tuberculosis. Yet, but the comparatively few contract it and it is for the benefit of these few that we are so diligent. The same is true of small-pox, where in an epidemic compulsory vaccination is employed that the comparatively few may escape the disease. So here, there is need of something more than what we have now either inside or outside our statute books. This matter is engaging the attention of our great American Medical Association and a committee of that body, headed by Dr. Park Lewis of Buffalo, is at work on this question. At the Atlantic City meeting, last year, and at the St. Louis meeting, this year, this committee presented elaborate reports which were approved in all particulars, and thus is committed the influence of the American Medical Association to this propaganda.

These are the recommendations approved at the former meeting:

1. The enactment of laws in each state or federal territory requiring the registry of births and placing the supervisory control and licensure of midwives in the boards of health, requiring that all midwives be examined, and registered in each county, and that they be required immediately to report each case of ophthalmia neonatorum occurring under their ministrations, under penalty for neglect, if found guilty, of fine and for subsequent offense forfeiture of license.

2. The distribution by health boards through bulletins and otherwise, of circulars of advice to midwives and mothers, giving instruction as to the dangers, methods of infection, and prophylaxis of ophthalmia neonatorum.

3. The preparation and distribution by health boards of ampules or other receptacles containing the chosen prophylactic with specific directions for its use. It is advised that the choice of the prophylactic be determined by the health officer, with the advice of the committee, representing the obstetricians and ophthalmologists for that state, from the American Medical Association.

4. The maintenance of proper records, in all maternity institutions and other hospitals where children are born, of the number of cases of ophthalmia neonatorum with the methods of treatment and the results. These reports, which should include all cases of scarred cornea as well as of blindness, should be filed at regular intervals with the department of public health, and the records published.

5. Periodic reports, to boards of health by all physicians engaged in obstetrics, of the number of cases of ophthalmia neonatorum that have occurred in their practice within a specified time; whether or not a prophylactic was used—if so, what—together with the result.

As to the first item pertaining to the enactment of a law governing this condition: Several of our states, Connecticut, District of Columbia, Illinois, Maine, Maryland, Massachusetts, Michigan, New York, Ohio and Rhode Island, have passed laws the principal features of which are (1) the person having the baby in charge must report, within six hours after the discovery of eyes swollen, red or inflamed, to the health officers or to a legally qualified practitioner of medicine of the city or town where the parents reside that such a trouble exists, and to secure attention. (2) Failure to comply with this provision is a misdemeanor punishable with fine or imprisonment or both.

In Connecticut the effect of the law has been so wholesome that many mothers ask their physicians to use the drops in the eyes of their newborn babies.

In Indiana to date nothing of this sort has yet been done, and our efficient Secretary of the State Board of Health is very anxious for the enactment of such a law, and has asked me to take that matter up, and hence this paper. He has gone as far as he dare to warn the physician in the "Certificate of Birth," wherein this question is

asked: "Were precautions taken against ophthalmia neonatorum?" In a letter Dr. Hurty writes thus: "It is interesting to review the certificates received. Some of our medical brethren ignore the matter entirely as 'cranky,' others insert funny remarks, but a majority answer the question. The idea of the question is to call the practitioner's attention to the matter and also to start the ball rolling in the direction of prevention."

In our large cities a very large proportion of births are attended by midwives, especially among the foreign-born population therein. The records for 1904 show that in Chicago, 86 per cent. of all births were reported by midwives; in Buffalo, 50 per cent.; in New York City for 1905, 42 per cent., and for 1907, 43.5 per cent.; in South Bend for 1909, 57 per cent.; in East Chicago, 55 per cent.; in Whiting, 46 per cent. One midwife in Indianapolis reported eighty-four of the births occurring in Indianapolis, last year. Now listen to the words of Miss Elizabeth Crowell, of the New York Association of Neighborhood Workers, who personally interviewed 500 midwives in their homes. She found but fifty who could be qualified for capability and reliability. She writes as follows: "The homes of these midwives are to be compared with the homes of the women whom they attend, the average three-room tenement—clean or dirty according to the personal habits of the midwife who occupies it. Of the midwives' homes, 106 were absolutely filthy, as was the clothing and person of the midwife herself. Of the remaining 394, I should say one-third might be designated as excellent, the other two-thirds fair. As for the bags and their equipment, from a professional standpoint, by far the greater number would make fit decorations for a chamber of horrors. Out of 303 bags inspected, thirty-four were marked as first class—that is, were clean and their equipment was complete and sterile. I was visiting one Italian midwife, whose home was one of the dirtiest, the condition of whose hands was indescribable, whose clothing was filthy, the condition of whose bag beggars description, when a call came for her to go at once to a confinement. Not wishing the woman to lose a case because of my being there, I told her to make her necessary preparations while I talked. 'Oh,' she replied, 'I am ready,' and throwing a shawl over her head and seizing the bag, she was off—to take the life, the future health, and well-being of a mother and child into her keeping." The law regulating the practice of midwives needs amending. The midwives themselves need instruction such as is being

carried on by the Department of Health of the City of Chicago.

This matter should start soon, as such a law should be procured at the next sitting of our State Legislature in January. In the meantime this State Association should take up the work already started by the Tippecanoe County Medical Society and procure all the education necessary, that the people may become intelligent on this matter, and thus have the best preventive possible for the bulk of the people who will respond to it. For those who will not, the law will help.

As to the item of education: In France the public is instructed by a circular, which is distributed by the Valentine Haüy Association of Paris, which reads as follows:

It has been shown, that in France more than one-third of the blind (18,000 in 40,000) owe their affliction to an inflammation of the eyes that followed shortly after birth and which is called ophthalmia of the newborn. The cause of this disease is well known and may be avoided; when it is once developed it may be cured. It is due to the ignorance and neglect of the mothers and other persons charged with the care of the new born child.

1. *Measures to be Taken by the Mother.*—When the woman is subject to white discharges, she must consult a physician. *It is these discharges that infect the baby's eyes and cause blindness.*

2. *Care to be Given the Child.*—Immediately after the birth of a child, before it is bathed, the lids and tissues about them must be carefully wiped free from mucus and they should be bathed with pledgets of cotton dipped in a solution of boric acid. The pledgets should be made of perfectly clean and dry absorbent cotton and should be burned after being used.

3. *What Must be Done When the Disease Appears.*—When the lids become red and swollen, are gummed along their borders, when the child sleeps or cries and matted discharge is mixed with the tears, an oculist or a physician should be called immediately. Each hour of delay adds to the danger. While waiting, bathe the eyes of the child with pledgets of cotton, dipped in a solution of boric acid, every half hour. Open the lids wide and allow the solution, which should be warm, to flood the eyes and wash out any matter which may have gathered there. The hands should be washed with soap and water both before and after bathing the child's eyes. The cotton with which the eyes have been bathed should be immediately burned. The child should not be fondled and none of the appliances, which have been used about the eyes or face, should be used for any other purpose. All of those in the home should be informed of the danger of catching the disease by getting the matter into their own eyes. Do not listen to those who say it will amount to nothing, or to those to bathe the eyes of the child with mother's milk, such advice is pernicious and will cause the loss of precious time by delaying the employment of means which might save the sight of the child.

It will be noted that nothing is said of the Credé method. It may be that the antipathy of the French for the Germans forbids its mention. Anyhow these excellent rules of advice will stand some modification in this and other respects possibly.

The third item of this committee's report calls for the distribution of ampules of the preventive. This is reasonable, as we distribute to the poor the much more expensive antitoxin for diphtheria.

Items four and five relate to the registration, which is reasonable, for thereby we may be able to get a correct idea as to the blind of our country, and thereby be the better able to combat its onward progress.

THE ECONOMIC FEATURE

Unfortunately for our state, reliable statistics are not available as to the percentage of those blind from this disease who are in our School for the Blind. The authorities in charge of that school need to wake up to the importance of such statistics. These are obtainable only by a careful examination of each pupil and record thereof. The proportion in other states will hold for this one, and thereby we find that, out of the 122 in attendance for 1909, at least thirty-seven are there because of ophthalmia neonatorum. It costs the state \$335 a year to educate each child thus blind, i. e., \$12,355, which in the future may as well be saved. (It costs the state but \$30 a year to educate the seeing child.) It will cost a good deal less than the first sum to stamp out that disease forever.

This is not the only loss. Every blind person is not a wage-earner in the ordinary acceptance of the term. There is so little that they can do to make a living that they are an economic loss to the community, because they cannot produce their share of what each person should produce for the well-being of the community. In this state we have approximately 2,500 adult blind persons, of whom 825 are thus from this disease. The individual is good for wages at about \$600 per year on an average. This state, therefore, suffers a money loss of at least \$500,000 per year, to say nothing of the economic loss that is produced because these blind persons, on account of their disability, are unable to take their place in society on a par with those who see.

To accomplish these ends cooperation is necessary on the part of all societies, county and state, medical and lay. To date, our own State Association has taken no action looking to this great end, which the American Medical Association

has in view, in saving to this nation the precious eyesight of those otherwise doomed to the darkness of life-long blindness.

By action of the Tippecanoe County Society, which sends up this paper to the State Association Meeting for reading, the following letter indicates the propaganda that has been put on foot by that society. To date a number of the county societies have put themselves on record by adopting suggestions contained therein and the gospel of prevention has been fairly launched in this state; and may the day hasten when the disease known as ophthalmia neonatorum will possess an historical interest, only, to physician and layman alike.

TIPPECANOE COUNTY MEDICAL SOCIETY
LAFAYETTE, INDIANA

March 10, 1910.

To the ——— County Medical Society.

Dear Doctors: Because Institutions for the Instruction of the Blind (which keep accurate data concerning the cause of the blindness of their pupils) report about thirty-five per cent. of their pupils to be blind as the result of Ophthalmia Neonatorum, the Tippecanoe County Medical Society by its Committee on Ophthalmia Neonatorum, asks the co-operation of the profession, by County and District Society action and otherwise, in a propaganda looking to the abolition of the disease in this State.

We recommend that the widest publicity be given the Credé method, which consists in dropping into each eye of the new-born babe, by the physician, one drop of a one per cent. solution of silver nitrate, as soon as possible after the birth of the baby's head and the cleansing thereof.

We recommend co-operation of all societies to secure of the next Legislature the passage of a law as will best stamp out this preventable disease, and save eyes otherwise doomed to destruction.

We recommend that each society appoint a committee on Ophthalmia Neonatorum in order that it may in its own county use its influence with the profession and public in eradicating this disease.

We recommend that each county and district society take action, endorsing this propaganda, and that such action be reported to the undersigned committee, that the Committee of the American Medical Association on Ophthalmia Neonatorum may be informed as to the progress made in this state as to the above actions. Said committee will report its progress to the next meeting of the American Medical Association, the first week in June.

Fraternally submitted,

GEORGE F. KEIPER, Chairman.

EARL VAN REED, Pres. Tippecanoe Co. Society.

W. N. RESER, Sec'y Tippecanoe Co. Society.

Prof SEVERANCE BURRAGE.

DISCUSSION

DR. D. W. STEVENSON, Richmond: I think this is a timely subject and an excellent paper. We ought to have a paper on this subject at least every other year. It should be considered a dis-

grace for a family to have this disease and it should also be considered a disgrace to the doctor when blindness follows the disease in a child he has attended from birth. The treatment that has been mentioned is the very best. You cannot possibly harm the eyes with the Credé method of treatment. Some use solutions of argyrol and protargol in varying strengths, but whatever solutions are used should be freshly prepared. It is easy to make a 10, 25 or 50 per cent. solution of argyrol, and even the stronger of these is perfectly harmless. A simple way of preparing an efficient solution is to fill a homeopathic vial with one-quarter or one-half argyrol and the balance distilled water. This solution may be dropped in the eye of the child as a preventive. It may be used on any child whether ophthalmia neonatorum is suspected or not, and it is efficient in destroying other germs than gonococci which affect the child's eyes and come from the vaginal tract. Why should this harmless treatment not be carried out in every case? It certainly can do no harm and it may prevent the development of ophthalmia neonatorum when the disease is least suspected. Ophthalmia neonatorum is a disease that requires the unremitting care of doctors and nurses. Ordinarily not enough importance is attached to the statement of the nurse that the baby's eyes are red, or that there is discharge from the baby's eyes. It does not suffice to say that the baby has taken cold or has been exposed to the light. No mistake will be made if that baby's eyes are considered as being possibly infected with gonococci and the proper treatment instituted immediately. I know of no more harrowing scene to a family physician than to see a child grow up totally blind, due to the failure of that family physician to recognize ophthalmia neonatorum and to adopt the proper treatment to prevent blindness. The subject is worthy of earnest attention on the part of physicians, midwives and the public, and we should all aid in disseminating knowledge which shall result in limiting the number of cases of preventable blindness caused by this disease.

Dr. J. N. HURRY, Indianapolis: A few days ago I was walking down Pennsylvania street past the blind asylum with a very eminent judge of the state of Indiana. There appeared, between the palings of the fence surrounding the blind asylum, the faces of two blind boys, with their eyes turned upward, the sightless white eyeballs plainly in view. The judge expressed pity for the children, and I said: "Yes, it is gonorrhea that has caused, and is causing this blindness in children." He said, "Is that true?" and I explained to him the whole situation. He immediately said, "Why don't the doctors tell that to the people?" and I said to him that it had been told over and over again. He said, "It is your duty to tell it again and again, and never cease telling it."

Now there was a learned judge who had not heard of ophthalmia neonatorum. It gives us a hint of the work which the medical fraternity has to do in connection with this matter. That it is the duty of the medical profession to make this subject, of where one-third of the blindness comes from, plain to the people, there is no question. Is the medical profession performing its duty? Is each individual performing his duty in this matter? It is certainly true that in the community of each and every one of you, or in an adjoining community, there are some persons who are blind, and there is a cause for that blindness. You know the cause, but are you telling the people of the cause? If you are not, are you not neglecting a plain duty? Such is the view of the eminent judge, who said that if we are not telling the people, then the medical fraternity is deficient in so far as it does not let the people know the facts. I have been asked why the State Board of Health does not disseminate this information by circulars and otherwise. I have replied that it was with the utmost difficulty that we get enough money to publish the few circulars on the subject of tuberculosis, which we are constantly sending out, let alone get money to cover the cost of circulars pertaining to other diseases.

The object of my remarks is to call attention to the fact that, unless the people of this state are within the next decade thoroughly instructed in regard to the subject of ophthalmia neonatorum and this terrible loss is stopped, through the preservation of the eye-sight of the poor infants who are afflicted with the disease, then, indeed, is it pertinent to pass comment on the lack of effectiveness on the part of the medical fraternity. I know that you will agree with the judge in that view of it, and with the statement that in the past we have not been properly performing our duty. In this connection I have a resolution which I desire to introduce, and it is as follows:

First, Resolved, That it is the duty of the House of Delegates of the Indiana State Medical Association to appoint a committee on the prevention of blindness, and that such committee work to secure, by education and legislation, such action as may be necessary to stamp out preventable blindness.

Second, Resolved, That the President of the Indiana State Medical Association appoint a committee on preventable blindness, consisting of five members, with Dr. George F. Keiper as chairman, and that \$50 be appropriated to defray the necessary expense of such committee. (A motion was made and carried that this resolution be referred to the House of Delegates, and later the House of Delegates authorized the appointment of a committee on preventable blindness, and appropriated \$50 for the necessary expense of such committee.)

SKETCHES OF THE MEDICAL HISTORY OF INDIANA

G. W. H. KEMPER, M.D.

MUNCIE, IND.

MEDICAL HISTORY OF MADISON COUNTY

(Continued from page 409, vol. III.)

RICHMOND, JOHN L.—Pendleton (1785-1855). Dr. Richmond has a two-line mention in Forkner and Dyson's History of Madison County, but no dates are given. This is the Dr. Richmond who performed the operation of Cesarean section at Newtown, Ohio, in 1827. See sketch by Dr. Kemper.

RIDER, DANIEL M.—New Columbus (1827-1907).

RINGO, JAMES L.—Elwood (1866-1901). S. T. 1902, 422.

RYAN, TOWNSEND.—Anderson (1813-1879). Dr. Ryan was born in Lancaster, Pa., 1813. In early manhood he removed to Hamilton, Ohio, where he engaged in the mercantile business and was also part



owner and manager of a line of canal packets running between Hamilton and Cincinnati. He was impoverished by the panic of 1837. He then studied medicine and graduated at the Jefferson Medical College, Philadelphia. He practiced first at Lewisville in Henry county, but removed to Anderson in 1842 and for about twenty-five years was one of the most prominent physicians of the county and state. He was one of the vice-presidents of the Indiana State Medical Society at its organization in 1849. He was elected to the legislature from Madison county in 1846. He was engaged actively in the construction of the first two railroads which now pass through the county. He lost his fortune the second time in a contract to build a railroad from Rushville to Indianapolis. He then returned to the practice of medicine in which he was eminently successful.

When the Civil War broke out he was the first democrat in the county to declare in favor of the war

policy of President Abraham Lincoln. He was a fluent public speaker and gave much time to the raising of troops. He soon received a commission as lieutenant-colonel of the 34th Indiana Volunteer Infantry and went into active service in 1861. He was promoted to the colonelcy of the same regiment in 1862 on the resignation of Colonel Steele. After the capture of Island No. 10, he resigned on account of ill health. Not being content out of service he soon returned to the front as surgeon of the 54th Indiana Volunteer Infantry, in which capacity he served until near the close of the war, when he again engaged in practice in Anderson. During a few of his latter years he was engaged in mercantile business. He was a man of superior intelligence, with a mind which seemed in advance of his time; always looking toward and planning for the future.

SAUNDERS, JOSEPH.—Prosperity (1849-1909). A native of Ohio. Came to Madison County in 1871. Graduated at Indiana Medical College, 1844. Practiced in county twenty-five years. President of Madison County Farmers' Insurance from organization.

SIMS, T. S.—Elwood (1836-1896). Dr. Sims was a native of Virginia. Came to Madison County in 1876. Practiced in Elwood sixteen years.

SPANN, BENJAMIN F.—Anderson (1830-1894). Born in Jefferson County, Indiana, May 14, 1830. Practiced at Lebanon before locating at Anderson, where he arrived November 19, 1860, and continued in practice for thirty-four years. He was a graduate of the Ohio Medical College. He served a term as coroner of Madison County. By appointment of the governor he was also a trustee of two state institutions, the Indiana State Normal School at Terre Haute and the Hospital for the Insane at Indianapolis. He was a member of the county, state and national medical associations. S. T. 1894, 225.

STEPHENSON, JOSEPH.—Pendleton (1819-1886). S. T. 1886, 213.

SUMAN, WILLIAM.—Anderson (1829-1898). A native of Madison County, where he practiced medicine thirty-eight years; twenty-two in Anderson, and sixteen in Frankton. Was a faithful member of the medical societies of county and state. S. T. 1899, p. 393.

SWALLOW, GEORGE E.—Summitville, (18—-1893).

TERRILL, LUTHER B.—Anderson (1854-1910). Born in Missouri. Educated in Cincinnati. Graduated at the Medical College of Ohio in 1880. Practiced medicine in Cincinnati. Removed to Anderson in 1895, where he was one of the foremost physicians for fifteen years. He was a surgeon of acknowledged ability. Served as surgeon of the American Steel and Wire Company during the entire period of his residence in Anderson.

VAN METER, ISAAC N.—Florida (1849-1899). A native of Madison county. Graduated from Indiana University in 1871 and from Indiana Medical College in 1872. Practiced in Madison County twenty-three years. S. T. 1900, 340.

WALKER, MADISON GREENE.—Pendleton (1809-1875). A native of West Virginia. Came to Madison County in 1833, where he was one of the prominent physicians for twenty-nine years. Retired to a farm in 1862. Removed to Carthage, Missouri, in 1874.

WEEKS, JOSEPH.—Huntsville (1820-1908). Began practice at Huntsville, where he was located for seven years. Removed to Mechanicsburg in Henry County, where he enjoyed a large practice, extending far into Madison County, for more than half a century after his removal from it. He was the father of physiomedicalism in his section. For portrait see "The Pioneers," by S. Hardin, p. 41.

WESTERFIELD, JOHN W.—Anderson (1816-1895). Born in Preble County, Ohio, June 1, 1816. Removed with his parents to Fayette County, Indiana, in 1828, and to Rush County in 1834. Studied medicine in Rushville. Removed to Madison County in 1839. He practiced medicine in Anderson many years and owned the first drug store established in the town. Served one term as auditor of Madison County. For portrait see Forkner and Dyson's History of Madison County, p. 369.

WICKERSHAM, NOAH LUDLOW.—Anderson (1827-1897). Native of Ohio. Graduated at Miami Medical College in 1862. Practiced nine years in Huntington County before this date. Practiced thirty-five years in Anderson. He wrote poetry of no mean character. S. T. 1897, 356 and 357.

WYMAN, HENRY.—Anderson (1806-1892). A native of New York. Came to Madison County in 1831. In active practice until 1864, then removed to Blissfield, Michigan, where he died in 1892. He is regarded as the first scientifically educated physician to locate in Anderson. Had a large practice, which extended all over the county. As a diversion he edited a local newspaper. Represented the county in the legislature one or more terms and was ranked among the ablest of her representatives.

THE COUNTY SECRETARY AS THE LOCAL MEDICAL HISTORIAN *

CHARLES N. COMBS

Secretary of the Vigo County Medical Society and Secretary
of the Indiana State Medical Association

TERRE HAUTE, IND.

One could scarcely expect to win applause or gratitude for adding yet another task to that already overburdened individual, the Secretary of the County Medical Society, yet there appears a plain duty to the profession of the now and of the to-morrow that can be performed best by that officer. I refer to the collection, tabulation and custody of all historic data relative to the medical profession in addition to that which is included in the record book. As the different counties in Indiana now approach the centennial of their existence, they discover that they have been making history and that if suitable mementos of this epoch are to be perpetuated for posterity they must be seized at once, while they are still complete, from the ravaging hand of Time.

In the Eastern States historical societies have been in evidence some time, and of late they are to be observed creeping westward. The "Western Association for the Preservation of Medical Records," recently organized by Dr. C. A. L. Reed, at Cincinnati, is a pioneer in these parts and the editorial commendation given by the *Journal of the A. M. A.* is well deserved.

The articles of Dr. Kemper, appearing in the *STATE JOURNAL*, are responsible for my interest in this matter and led me to elaborate a plan for the systematic collection of all materials in my own county. An outline of this scheme is given with the aim of enlisting every county secretary in this same endeavor.

The only duty of the secretary specifically nominated in the By-laws that parallels this work is to keep a list of the society members, noting of each correct name, address, place and date of graduation and the date of the certificate entitling him to practice medicine in the state and further in a separate list to note the same facts in regard to each legally qualified physician not a member. These lists are often kept in books and ephemeral sheets of paper with haphazard entries. And so, as an advance towards uniformity, the card index system is advised, using the printed card furnished gratis by the A. M. A. (sample). These cards are filed in two groups, members and non-members, and contain all the vital information concerning every living physician in the county.

2. This being completed to date, the secretary should be the first one to know of every new comer, adding new cards to the file. The possibility of securing a new society member, of course, is the primary stimulus to an early acquaintance. The register of the county clerk should be copied up to the minute and every arrival who is not therein enrolled should be promptly warned in the name of the society to comply with the law immediately.

3. Keep a record of every quack and quack institution by means of a chronological file of advertisements in all periodicals and also handbills, circulars and other publicity propaganda. A collection of this kind is an interesting study in the psychology of graft and may be read when all other late fiction is devoured. Such a compilation dating back twenty-five years, tracing the coming and going of charlatans, in spite of their being "here to stay" and "an established specialist," reveals their devices and manifestations and is a melancholy chapter in medical history.

4. The most important division of the scheme is a card index catalog, in which every doctor who has ever practiced medicine or even resided here

* Read before the meeting of County Society Officers at Terre Haute, Oct. 7, 1909.

is represented by a card. The biography to be entered covers time and place of birth, preliminary education, pre-medical occupation, time and place of graduation, when and how long practicing, school or specialty, member of what societies, papers read before societies, papers published, offices held, medical or public, literary work, hobbies, post-graduate study and member of what church and organizations, family, time, place and cause of death.

In starting this, get a small indexed book to carry with you, entering every name you happen upon accidentally, later transferring them to the cards. A thorough search entails the perusal of every city directory, all the Polk's, Butler's Standard and A. M. A. medical directories, The State Transactions, reports of the Board of Health and State Board of Medical Registration and Examination, old files of newspapers, registers of the county clerk under the old law and the new, published histories of the counties and finally the records on the tombstones.

Supposing the directories to be accurate, you can ascertain the length of time each man was in the county. Here is such a book containing 557 names occurring in the county of Vigo. Without actual enumeration, no one would estimate that large a number. Use one card for a list of doctors that have filled offices in the city and county; other cards for the extent of practice of medicine by women, the rise and progress of homeopathy, eclecticism, physio-medicine, even osteopathy, with perhaps one for the development in transportation from the horse and saddlebags to the automobile.

5. Still another scrap book contains clippings from the public press relative to the individual physician, medical societies, Board of Health and hospitals, professional cards, etc. I manage to fill a fairly large book every year of this kind. This in itself constitutes material rich enough to write a history from.

6. A file of every bulletin, program and announcement of the medical society, all banquet programs and menu cards and other souvenirs of the social side of the profession.

7. In cities preserve hospital reports, medical college catalogues and local medical journals

8. In the back of the secretary's record book construct a table showing the officers of every year since the society began, showing every member, with date of joining and leaving society, with explanation of the latter. Another showing title and author of every paper read before the county

society and every paper read by local members before the state and district societies.

9. Before the older members pass away, interview them and record full notes concerning the organization of hospitals, the medical society, colleges, Board of Health, concerning epidemics and development of health laws.

10. The secretary may be instrumental in the inception of a society medical library if your county does not already have one. It is usually possible to have donated the old medical books of a deceased member and these, accumulating with the demise of the doctors, will form a nucleus and lead to larger things. True, these books possess only historic value, but their preservation with the owner's autograph insure a remembrance and a monument to that physician. In time a small fund will be appropriated to subscribe to a few current journals and later on to buy regularly new standard books. For the physicians thus to pool their book or journal money will result in each one having access to a larger library than he can ever hope to own himself. With the books should be preserved paintings or portraits of the physicians or donors. It may well be urged upon every secretary to secure, by some means, every one of the transactions of the state society and also all of the reports of the State Board of Health and State Board of Medical Registration.

11. Doctors, busy with the day's duties, acquaint themselves but little with medical history, some from lack of time; a few, alas, from lack of interest and the secretary can be of use in writing the history of his own county from all this store of information which he had compiled, putting the same in a small pamphlet and placing a copy in the hands of every member.

Here, indeed, is outlined a task of such magnitude as to rival one of the labors of Hercules, but its accomplishment is pleasant when one reflects upon its priceless value in later years.

Do not understand me to be unmindful of the more necessary duties of the secretary. What is required, however, is one who, above ordinary qualifications, is a born statistician—systematic to a fault, a curator of historic relics, a conservator and not a vandal of records.

ANTERIOR poliomyelitis is getting to be a serious proposition in several states where it has spread with considerable rapidity. The disease has appeared in several localities in Indiana and the State Board of Health has acted wisely in recommending strict quarantine.

THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

EHRlich's "606" IN SYPHILIS

With the possible exception of the announcement of Koch's discovery of tuberculin, it is doubtful if any achievement in the whole domain of medicine has created such widespread commotion as Ehrlich's recent discovery of the remarkable specificity in syphilis of dioxidiaminoarsenobenzol. Despite the ultraconservatism of its elaborator, and all his efforts to limit the use of the first output of the drug to a certain few of the medical profession who restrict their work to syphilis alone, in order that every check and control should be tried out upon the remedy before its general adoption by the profession, yet already the public has seized upon the discovery and through the lay press is demanding more light upon this vital subject. Meantime the medical press teems with reports of the wonderful results attendant upon the use of the drug, and, restricted though its use has been, it is said that Ehrlich now has reports on about seven thousand cases treated with "606."

With the possible exception of a few visitors to Ehrlich's clinic, to whom a limited quantity of the product has been supplied, practically all of the clinicians who have had an opportunity of applying the remedy have been Europeans, and it is to the foreign literature that we are indebted mainly for our knowledge of the subject so far. The *Journal* of the A. M. A. has, however, very faithfully abstracted these foreign reviews and also published from time to time much concerning the chemistry and manufacture of the product.

Unlike atoxyl and sodium cacodylate, "606" is a very unstable product of arsenic and has to be marketed in the form of the hydrochlorid, a highly acid salt. This, in turn, before administration has to be accurately neutralized by titration, and upon the exactness of this neutralization depends the minimum of toxicity and pain resulting from the administration of the so-called "606 hyperideal."

Remarkable as it may seem, one injection of 0.6 gram of "hyperideal" under the skin in the intrascapular area produces results unattainable even by months or years of administration of the older antiluetic specifics, mercury and potassium iodid.

It is Ehrlich's desire that the remedy be applied only in those cases in which either the Wassermann reaction has been found positive or the spirochetæ have been demonstrated to be in the living state. As to the results of the Wassermann reaction applied after the administration of the drug for the purposes of prognosis, Corbus, but just returned from Ehrlich's clinic, declares them to be as yet very variable. Clinically, however, there can be but little doubt that the effects produced are far superior to any that have been heretofore obtained by any or all means at our disposal and every day the list is added to, wherein the effect has been little short of marvelous.

From our own country Nichols writes that "the reports which are appearing at present in practically every number of the important German medical weeklies from different parts of Germany and Austria are almost unanimous in their testimony of the remarkable effects of the drug in syphilis. In all but a few exceptional instances a single dose of the drug has sufficed to bring about a rapid disappearance of the lesions of syphilis and equally rapid improvement in the general condition of the patients. In the few instances in which these rapid effects were not achieved the dose of the drug, which was originally given, was, as is now established, too small, and in many of these cases a second and larger injection has brought about the desired result. It is noteworthy that in many instances the patients who have improved rapidly after an injection of this drug had resisted the application of mercury sometimes over many months, or possessed idiosyncrasies which made the use of mercury difficult or impossible. Thus far, a special idiosyncrasy against the drug has not come under notice. [Several fatalities are referred to later.—Ed.]

"It is as yet too early to determine whether the patients, who have responded so rapidly and perfectly to the administration of the drug as apparently to have been cured of this otherwise chronic disease by a single injection, may ultimately suffer relapses. On the other hand, many scores of patients have shown no relapses in the several months which have elapsed since the injections. What is highly important in the interests of prophylaxis is that within twenty-four or forty-eight

hours of the injection of the drug superficial lesions, such as mucous patches, condylomata and primary lesions are freed from living spirochetæ. This remarkable effect of the drug on the parasites can be readily demonstrated on the testicular spirochetal lesions of the rabbit, in which the innumerable spirochetæ can be entirely immobilized within twenty-four hours with a single injection of the drug, after which the lesion quickly resolves."

The twelve cases reported by Nichols and Fordyce showed the same brilliant results as are being reported from Europe. They conclude that it may reasonably be hoped that all the lesions dependent upon the presence of the spirocheta pallida will be favorably influenced and the most we can expect in the secondary degenerative changes is that the process may become arrested.

It will not be amiss here to mention that Ehrlich warns against the use of the drug in the presence of advanced cardiovascular disease, or where lesions of the optic nerve exist.

McDonough asserts from his experience that the earlier the syphilis the larger the dose required (0.45 to 0.6 gram) and that 0.3 gram is ample for the late cases. Toxic symptoms were not marked in any of his cases, but, on the other hand, he was impressed by the marked improvement in the general condition of the patient. He thinks the severer the case the quicker the action and his results far outreached his expectations.

Isaac reports twenty-seven cases, all showing markedly beneficial results with no serious by-effects, nor has Michaelis observed any threatening ones in his seventy-one cases.

Fraenkel and Grouven conclude from their experience in over 100 cases that the remedy marks a distinct progress in the treatment of syphilis and possibly other diseases, but report one fatality, after the intravenous administration of the drug, which they ascribe to an individual hypersusceptibility to the arsenic. The patient was a waiter of about 25, who had suffered for years from severe speech disturbance, word-blindness, etc., evidently of luetic origin, and had been in the psychiatric clinic for eighteen months on that account. The drug was administered in 15 c.c. of water. Fifteen minutes later symptoms of serious arsenic poisoning developed, proving fatal in three and one-half hours. Autopsy showed extensive foci of softening in the left temporal lobe and distinct amounts of arsenic were recovered from the spleen, lungs and liver. They no longer employ the intravenous route. Their other results far surpassed any ever attained by mercury.

Kromayer reports twenty-seven cases in three of which some of the symptoms persisted after the injection and in five others there has already been a recurrence. A positive Wassermann reaction became negative in only 25 per cent. of the cases. His experience confirms the rapid reabsorption of the pathologic tissue of the syphiloma and the prompt healing of ulcerations from the stimulation of epithelium to proliferation.

Spiehoff states that his experiences with fifty cases were all favorable, although the reaction to the drug was rather severe in a number of patients. For the most part his untoward symptoms consisted of psychic and visual disturbances, although one anemic woman injected in the afternoon was found dead in bed the next morning, but at autopsy showed no signs of arsenic intoxication. Ehrlich attributes this death to shock due to local painfulness at the site of injection.

Herxheimer noted no by-effects of consequence in eighty-three cases. One neurasthenic developed urinary retention which immediately responded to a hot sitz bath. Forty-eight hours after the injection no spirochetæ were to be found in eighty-two cases, nor has recurrence been observed to date. In the other case the spirochetæ did not seem to be affected, and a similar result has been met by A. Glück in two cases, as though certain rare strains of spirochetæ must be insusceptible to the drug, just as some are mercury-fast. The drug proved especially efficacious in malignant syphilis.

Jlinek warns against the two promiscuous heralding of the curative powers of the drug for fear of throwing down the barrier to venereal infection caused by its dread by the laity.

In his sixty cases Iversen declares the Wassermann reaction to have been invariably negative by the twentieth to the fortieth day after the injection. Spirochetæ uniformly present in chancres before injection always disappeared by the third day thereafter.

Taege reports the interesting case of the infant of a syphilitic mother, weighing only some 5 lbs. at birth, apathetic and disinclined to nurse. On the ninth day it developed progressive pemphigus on the soles, and paronychia. The mother was given 0.3 grams of "606" subcutaneously and three days later all the nursing's symptoms began to subside. In two days the infant was transformed into an apparently healthy, hungry and rosy baby. He ascribes the change as due to the production in the mother of antibodies from the sudden destruction of spirochetæ and liberation of their endotoxins. The drug did not pass into the milk.

Pick observed the favorable influence in malignant cases especially and the secondary phenomena were prevented in his ten early cases. Lesions on the mucosa that had resisted other treatment for years vanished, some in one day and all in four days after injection. An ulcerative syphilid, involving the whole hard palate and part of the soft, for eight years unmodified by mercury and potassium iodid, cleaned up by the third day, and entirely healed in one week.

Relative to untoward or by-effects, other than occasional higher temperature and local pains, Klingmüller and Pinkus report one case of gangrene, three of local necrosis, two of abscesses, three of toxic erythema, one of detrusor paralysis, one of tenesmus and a case in which pre-existing diabetes became aggravated and persisted so to date.

General disturbance occurred in only one of Gennerich's thirty cases treated by "606." One paretic and two hemiplegics showed marked improvement almost immediately in contrast to the slow gain made under mercury.

At the present time it would certainly seem that in "606" we are to have a luetic specific of higher potency than is shown by any known therapeutic agent and though it cannot be expected to repair the old sclerotic changes wrought by long-existing syphilis, yet the arrest of further progress, the relief of the toxic condition and the elimination of a contagious factor to the community are attainments of the highest value.

ERRORS IN DIAGNOSIS

Every careful clinician realizes that it is from his well-proved mistakes that the greatest and most lasting lessons frequently come to his medical training. Several logical reasons are responsible for this phenomenon; first, after a careful ante-mortem diagnosis is worked out and seems well-grounded from a clinical standpoint, a rude shock is afforded by a post-mortem which, to a greater or less extent, negatives the ante-mortem diagnosis. It is but natural that this surprise should serve to fix its impression in one's mind and place one on his guard for similar future contingencies. Second, such autopsy-proved error stimulates the attendant to a search through the literature to ascertain how often the other fellow has "missed it" under similar circumstances. Third, there is a natural pride resident in the bosom of every one of us in being as nearly right in our diagnoses as seems possible, and to find ourselves definitely proved wrong occasionally not

only stimulates us to work just a little harder on the next case, but to be a trifle more charitably inclined toward some other man's diagnosis with which we do not happen to agree.

To those who were not fortunate enough to hear the oration in medicine before the section on the Practice of Medicine at the St. Louis session, Cabot's review of his mistaken diagnoses as based on the findings at 1,000 autopsies¹ should prove most interesting. He carefully analyzes the cases clinically, and records the diagnoses, and then goes over the post-mortem findings to find what errors have been made and whether such errors are ones of "omission" or "commission."

The first group of cases is made up of certain diseases of the heart and blood-vessels, and several interesting points are brought out in the discussion thereof. One of these is to the effect that by no means every presystolic murmur heard most clearly at the apex is diagnostic of mitral stenosis but, as was long ago noted by Flint, is very apt to be due to any cause which produces a marked enlargement of the heart, such as chronic nephritis, pericardial adhesions, arteriosclerosis and hyperthyroidism. Indeed, Cabot declares that in most patients beyond the fiftieth year presystolic murmurs are of very little consequence. Concerning aortic stenosis, three points are emphasized by the author: "1. Aortic stenosis may exist despite the presence of an accentuated aortic second sound, although, as a rule, this sound is diminished or absent. 2. Aortic stenosis may exist in association with a 'water-hammer' or 'Corrigan' pulse, though the rule is against this." He does not attempt to account for these two facts. "3. With long-standing cases of 'rheumatic' endocarditis involving the aortic valve in patients under 35 years of age, aortic stenosis is almost always present (as proved post mortem) whether there are any characteristic physical signs pointing to it or not."

Inasmuch as diastolic murmurs without vascular phenomena to correspond ("water-hammer" pulse, capillary pulse, etc.) usually turn out post mortem to be associated with a sound aortic valve, Cabot refuses to make a diagnosis of aortic regurgitation without the presence of such corresponding vascular phenomena along with the diastolic murmur.

Like most other modern internists of large experience the author does not believe that chronic myocarditis can be diagnosed *intra vitam* and that a correct diagnosis of this condition, or of acute degeneration of the myocardium such as occurs in fevers, or of the fatty changes

1. Jour. Am. Med. Assn., Oct. 15, 1910.

observable in most cases of pernicious anemia, is wholly a matter of luck, there being no constant findings with any of these conditions.

The diagnosis of arteriosclerosis rested on a general knowledge of pathology rather than on physical examination.

As between a diagnosis of aneurism and one of mitral stenosis, the probability is always of aneurism, and such diagnosis should only be made after all data have been most carefully collected.

Cabot's clinical and post-mortem experience with heart lesions diagnosed as mitral regurgitation (the commonest of all cardiac diagnoses) has convinced him that such diagnosis is not only an unverifiable but a superficial judgment about as definite, he says, as tachycardia. The essential point in the diagnosis of nine-tenths of this class is to know what is back of the mitral leak—chronic nephritis, hypertension, cardiac hypertrophy and dilatation, arteriosclerosis, etc.

Of the diseases of the respiratory system many correct diagnoses of lobar pneumonia were made without distinctive physical signs but from symptoms known to have occurred in other cases of a similar type.

When an apparent bronchitis renders the patient too ill for a simple bronchitis, one is warranted in a diagnosis of broncho-pneumonia.

The x-ray has not materially aided Cabot in his diagnosis of incipient tuberculosis.

Experience has taught the author that tuberculous meningitis means miliary tuberculosis.

Of the diseases of the urinary system, the diagnosis of acute nephritis is, at the present time, difficult because of the fact that cases formerly thought to be acute were proved by blood-pressure measurements to be but acute exacerbations of a chronic affair. Most of the cases of acute nephritis encountered could be attributed to infection by the pneumococcus or the organism of septic endocarditis, or to mercurial poisoning. Chronic glomerular and chronic interstitial nephritides were far more readily diagnosed.

With regard to diseases of the nervous system, one of the interesting features was the frequency with which cases clinically diagnosed apoplexy, on post mortem showed an arteriosclerosis of the cerebral arteries with no evidence of hemorrhage whatsoever.

Although the presence of cerebral tumors was readily diagnosed, attempts at their localization were usually failures.

Tuberculous and septic meningitides were for the most part easily diagnosticated.

Of the lesions of the digestive tract only one-half as large a percentage of peptic ulcers was recognized as of the malignant cases. Hepatic

cirrhosis was correctly diagnosed in 61 per cent. of the cases.

Typhoid fever and diabetes mellitus, of course, seldom failed of recognition.

Although the diagnosis of cerebral syphilis is not at all uncommon, yet in the last decade Cabot has failed to see the lesion so diagnosed, confirmed at autopsy a single time.

The study closes with a most interesting summary and list of maxims that would be worthy of a permanent place in the drawer of the busy practitioner's desk, that it might meet with daily use.

EDITORIAL NOTES

REMEMBER that a portion of the Association dues for 1911 will be set aside as a medical defense fund to be used in defending members of the Association in malpractice suits.

As we have often said before, a few copies of *THE JOURNAL* go astray in the mails each month. If those subscribers who fail to receive their journals will promptly notify us, duplicate copies will be sent them.

THE dues to the Association are two dollars for 1911, payable on or before January 1 and delinquent on February 1. Why not pay them now and save your county society secretary the trouble of asking you for them later?

THE LaPorte County Medical Society publishes a 4-page bulletin which is a credit to the society, and ought to be copied by other county medical societies. The bulletin contains an announcement of the regular meetings and programs for the month, and one of the pages is devoted to news notes and comments.

THE promptness with which Dr. Crippen was tried, convicted and sentenced by the English courts is an evidence of justice meted out without the unnecessary and time-consuming technicalities which usually are a part of such trials in this country. And the worst of it is, justice is often defeated in our American courts by technicalities which it seems are not recognized at all in England. No one can doubt that Dr. Crippen had a fair and impartial trial, while at the same time the court prevented the wrangling of lawyers which, in this country, often makes our criminal trials a farce and the entire method of

procedure ridiculous to those who desire to see a fair and impartial trial, with righteous justice administered, and at the least expenditure of time, money and controversy over evidence.

JOHN D. ROCKEFELLER celebrated the opening of the new hospital attached to the Rockefeller Institute for Medical Research with an additional gift of nearly four million dollars. This benefaction makes the total of Mr. Rockefeller's gifts to the Institute eight million two hundred and forty thousand dollars. The action was further signalized by the placing of the institution's property absolutely in the hands of the board of trustees, establishing it as an independent foundation.

The example of Mr. Rockefeller might be emulated by other millionaires who have more money than they can ever use themselves, and who ought to consider it a sacred duty to use a considerable portion of their fortunes in benefactions for the public good. We know of no way in which money can be spent to better advantage than in promoting practical and scientific work in connection with medicine and surgery, and we hope that not only will Mr. Rockefeller continue to be liberal in his donations to various approved medical and surgical enterprises, such as the Institute for Medical Research, but that his example will be followed by other wealthy men.

WE desire to call the attention of contributors to THE JOURNAL to the necessity of carefully editing manuscripts before they are sent in for publication. Our printers demand copy that is just as the author wishes it to appear in THE JOURNAL. We regret to say that many of our contributors send in manuscripts that are extremely faulty in the grammatical construction of sentences, spelling, punctuation, capitalization and paragraphing. The fault is generally due to carelessness on the part of the author in permitting the manuscript to go out uncorrected after it comes from the hands of the stenographer. Such manuscripts have to be edited in THE JOURNAL office, and sometimes it means the expenditure of much time and effort on the part of the editors which they should not be called on to give to such work. Oftentimes it means copying the entire article in order to have the manuscript acceptable to the printers. The man who contributes articles for publication should take into consideration the fact that his own reputation as well as the reputation of THE JOURNAL is at stake, and a badly prepared article

makes a poorer showing in print than the same article makes when read before an audience. It should therefore be the rule to carefully revise and correct all manuscript intended for publication, and we respectfully ask that contributors to THE JOURNAL follow such practice. By so doing the editors will be saved unnecessary work and the contributors will bring more credit to themselves.

WE have received numerous letters from various sections of Indiana, Ohio and Michigan, making inquiry as to the ability and standing of one Dr. Geo. Thain, of Fort Wayne, who advertises extensively in the lay press concerning a so-called electrical cure for all kinds of blindness. To all such inquiries we have answered that Dr. Thain is not ranked as one of the reputable medical men of Fort Wayne, that he is an advertiser who makes ridiculous claims concerning his ability to cure disease, and that he is not a member of the local or state medical associations. We have recently learned that THE JOURNAL is not the only publication to receive inquiries concerning Dr. Thain, as the following item, taken from the *Labor Times-Herald* of October 14, will indicate. The *Times-Herald* comment is as follows:

Times-Herald is in receipt of a communication from Cleveland regarding a Fort Wayne physician named Thain who claims to perform remarkable cures in restoring sight to the blind. The inquirer states that he has been unable to learn of anyone who has been benefited by this practitioner, although great claims are made by the doctor. The inquirer further says that he is afflicted himself, has spent much money to improve his sight and is willing, as every blind man is, to spend much more, but would first like some definite information.

Times-Herald knows of but one Dr. Thain in Fort Wayne, and understands that he treats for blindness, but has never heard of any cures, phenomenal or otherwise that he has effected. He is a licensed physician, but is not a member of the Allen County Medical Society and inquiry develops that he has no standing whatever among his fellow practitioners, and it has been hinted that he is not entirely free from irregular practices. Replying directly to the inquiry from Cleveland and for the information of others similarly afflicted, *Times-Herald*, in all sincerity, believes that sufferers who have received no relief from other regular specialists need expect none at the hands of Fort Wayne's Dr. Thain.

IN previous numbers of THE JOURNAL we have had occasion to refer to the published report of the chairman of the Davis Memorial Fund, in which no mention was made of Indiana's contribution to the fund. Our comment was one of regret that Indiana had failed to contribute to such a worthy object, and we also thought it nothing

ing short of a disgrace that some other states, and particularly Illinois, contributed so little to the enterprise. We are very much pleased to learn that it was an oversight that Indiana was not credited with a small contribution, and with a view to giving all of the facts, we herewith reproduce a letter from the Treasurer of the Davis Memorial Fund, which shows that Indiana contributed \$20. The letter was sent to Dr. Peyton, who acted as chairman of the committee for Indiana.

CHICAGO, Oct. 17, 1910.

Dr. David C. Peyton,

Jeffersonville, Ind.

Dear Dr. Peyton:

On May 26, 1910, I received from Dr. Henry C. Marcy, Chairman of the Davis Memorial Committee, checks as follows:

St. Joseph County, Ind., Medical Society, J. W. Hill, Treasurer, \$5; Madison County, Ind., Medical Society, E. Charles, Treasurer, \$5; Vigo County, Ind., Medical Society, C. N. Combs, Treasurer, \$5, and Muncie, Ind., \$5. I do not remember by whom the last check was signed, but the contribution amounted to \$20 from these various sources. I suppose the Muncie check was the one from the Delaware County Medical Society.

As these checks were from out of town, and as the banks of Chicago charge exchange on all out of town checks, I paid out of my own pocket the 25 cents per check on each of these, so that these various societies would have the full credit of \$5 each.

Very truly yours,

(Signed)

FRANK BILLINGS, Treasurer.

J. P. MORGAN, the financier, who is noted for his practical manner of looking at things, has given further evidence of rational thinking by expressing disgust, when some of the delegates, at the national Episcopal Convention recently held in Cincinnati, introduced the subject of divine healing and expressed a belief in present day miracles in curing the sick by methods akin to those employed by Christian Scientists. When the discussion, on the healing of the sick by prayer and the application of holy oil, was at its height in the convention Mr. Morgan hastily made his exit, and when asked as to what he thought about the subject he is reported as saying, "It is the most disgusting affair I have ever listened to. I have heard more absurd statements from that platform on this subject than I have ever heard before."

For a long time it has been known that our clerical friends are losing their hold on the people, and they have been making frantic efforts to find something which will once more place them in the high position once occupied. The attempt to inject into religious teaching the

absurd and ridiculous theory that all disease can be cured by divine healing is going a step further than is warranted in efforts to secure something new and attractive to stimulate increased adherence to the church. According to our way of thinking, ministers will serve a higher and nobler purpose if they confine themselves to purely religious teaching, which has as its first principle the intent to make people morally better. The wrangling over dogma and creed is sufficiently distasteful to the outsider without injecting the farcical subject of divine healing into what should be the teaching of right living and right conduct as it pertains to our moral and spiritual betterment.

It is generally conceded that doctors are poor business men, but why should they be? They may not have been trained in business methods but it is never too late to learn. There is absolutely no reason why a doctor should not keep an accurate record of cases, including specific charges for all services rendered. Failure to make a record of charges for visits and office consultations has resulted in the loss of many hundreds of dollars to busy physicians, but the failure to collect what has already been charged has resulted in greater loss. One of the reasons why many doctors' bills are not collected is because the statements of accounts are not presented, or if presented are too late to effect a settlement that might have been made if the claim had been made soon after the services were rendered. Modern business methods demand the presentation of statements on the first of every month, and there can be no valid reason given for not adopting such practice. Practically no one but the doctor does an extensive credit business. The merchant expects and demands his pay at the end of thirty days, and if accounts run longer he makes an effort to get security or force collection by law. The manufacturer does likewise. The laboring man and mechanic receive their wages weekly or monthly. The farmer never extends credit but demands and receives cash for everything he sells, but he generally expects almost unlimited credit when he buys goods or service. The doctor is not given credit but he generally thinks he must extend credit to others whether there is reason for it or not. It is a matter of habit and it is time that doctors got out of the habit. Bills should be sent out monthly to rich and poor alike. Leniency and charity should be extended to the poor, but there is no reason or justice in waiting beyond the ordinary time limit for the payment of bills by those who are able to pay. It does not add to

the doctor's income or popularity, and in the end makes enemies of those who might be his friends and patrons.

IN this number of *THE JOURNAL* we publish some correspondence from the secretary of the Adams County Medical Society concerning the successful prosecution of an osteopath who attempted to practice medicine in Adams County without the formality of securing a license. The action of the Adams County Medical Society in taking the initiative in prosecuting an unlicensed physician is worthy of the highest praise, and other county medical societies in Indiana may with profit follow the example.

We are told that the law does not provide for the prosecution of offenders against the Medical Practice Act by the State Board of Medical Registration and Examination, but that the prosecuting attorney is required to bring suit when evidence warranting such action is brought to his attention. As a rule, medical men as individuals refuse to file affidavits against illegal practitioners, and for the reason that such action would probably be considered by some as indicating the display of a personal grievance and a spirit of retaliation. But if the local medical society assumes the burden of responsibility through its officers in filing the affidavit, the matter does not appear as personal. In fact the simplest and most effective way of ridding the state of quacks and unlicensed doctors is for the various county medical societies to take appropriate action by gathering the necessary evidence, placing it in the hands of the prosecuting attorney, and insisting that cases be prosecuted to the ultimate end. The affidavits should be filed by the officers of the county societies on the authority and sanction of the societies they represent, and the State Board of Medical Registration and Examination should be notified at once of such action and be requested to assist in carrying on the prosecution.

The Adams and Huntington County Medical Societies have already set a good example which we hope will be followed by county societies all over the state. There are probably many communities where physicians are practicing medicine illegally and without molestation. It is an easy matter to determine who is and who is not entitled to practice medicine in any given county if the county records are inspected. If the county records are not accessible it is possible to obtain the legal status of any physician in a given place by writing the secretary of the State Board of Medical Registration and Examination for specific information.

Having once determined that a person is illegally practicing medicine, nothing should be left undone to bring such person to justice.

TO SECRETARIES OF COUNTY SOCIETIES: Beginning Jan. 1, 1911, the dues payable to the State Association will be \$2 for each member. In most instances this will necessitate the addition of an extra dollar to the local society dues. The amount of dues being a provision in the by-laws, any change can be made only after the prescribed form. To take effect before January you must see that a written amendment is presented some time in November; a copy sent to each member ten days before the regular December meeting, at which time it may be voted on. For instance, many county societies now have dues of \$2 per year, and to cover the increase in the State Association dues the by-laws must be amended to read \$3, or more. It is hoped that you will encounter no opposition in this change, and it will be well for you to explain carefully that the House of Delegates raised the State Association dues for the following reasons:

1. The expenses of the Association are now much greater than they were before the Association was as large or as progressive as at present, and the income has not kept pace with the expenses. In consequence the old dues of one dollar per year were insufficient to pay the actual operating expenses of the Association.

2. The Association has pledged itself to provide medical defense for every member and a fund for this purpose will be set aside from the dues. When the members understand that as a result of a slight increase in Association dues they will be in a position to receive the assistance of the State Association in their malpractice suits, they will surely agree to the increased dues as readily as has been the case in some other states where this scheme is in operation to the entire satisfaction of all parties concerned.

Make it plain to the members that *THE JOURNAL* is self-supporting at the present subscription rate, and that no part of this money is to cover any deficit of *THE JOURNAL*. It is a matter of pride that no other state in the Union produces a state journal of equal size and contents for the small amount paid by each member of the Association.

There is always more or less confusion associated with an important departure from established customs, but if each county secretary will attend to this at once, it will obviate much of the inconvenience. Begin now to remind the Society at each meeting that no laxity can be permitted

this year in remitting State Association dues. Constitutionally we cannot retain a member whose dues are not received at this office before February 1, and to finish by that time you must start now. Collect the bulk of the dues at your December meeting, sending in that amount at the time, and then finish as you can during the month.

Remember to:

- (1) Remit \$2 State Association dues for each member of your society, and
- (2) Do it on or before January 1.

CHARLES N. COMBS, Secretary.

CORRESPONDENCE

SUCCESSFUL PROSECUTION OF AN OSTEOPATH FOR ILLEGAL PRACTICE

DECATUR, IND., Oct. 18, 1910.

Editor The Journal:—A case has lately been decided in the Adams county circuit court which I believe to be of sufficient interest to the profession to be reported in *THE JOURNAL*. Judge Gavin, one of the State Board's attorneys, stated that it was the first time a case of this kind had been decided by an Indiana court.

The case was *The State of Indiana vs. Homer D. Sowers*. Something more than two years ago Mr. Sowers came to Decatur and opened an office here, claiming to be practicing as a student under Dr. Johnson, of Fort Wayne. His sign read "Doctors Johnson and Sowers." Late in the fall, following the opening of the office, he went back to college, Kirksville, Mo., I think, but he returned early in the spring, having completed his third year's work and graduated.

Under the law he was not entitled to take the examination, not having taken a four years' course, and having graduated, he was not entitled to practice as a student, even under the immediate supervision of a registered osteopath, which he had done at no time in Decatur. He was simply using Dr. Johnson's name, Dr. Johnson not even seeing his patients.

The matter was brought before the Adams County Medical Society and a committee of three was appointed to investigate the conditions and see if Mr. Sowers had a right to practice, and if not, to see that he ceased to do so. After the usual delays we succeeded in having Mr. Sowers indicted by the grand jury for practicing without a license. After two or three postponements the case came to trial, and was decided a few days ago, the court holding that to practice as a stu-

dent, the student must be in the same office, under the immediate supervision of a licensed physician, and then for a period of no longer than two years. He was found guilty and fined \$25 and costs.

Mr. Sowers stated that there were numerous osteopaths practicing over the state under exactly the same conditions as himself. By examining the clerks' books it will be very easy for the secretaries of the various county societies to ascertain who are licensed. Mr. Sowers says he is going to Pennsylvania, where conditions are more favorable for him.

Very truly yours,

WALDO E. SMITH,

Secretary Adams County Medical Society.

DEATHS

DR. LEROY LEWIS, founder of hospitals at Auburn, N. Y., and Bay City, Mich., died at South Bend October 27. Dr. Lewis was born in 1855, and was a member of the Indiana State Medical Association.

DR. THOMAS C. GREEN, Medical College of Indiana, 1882, a veteran of the Civil War, and formerly a practitioner of Albion, Ind., died at the home of his son in Fort Wayne, September 15, from abscess of the lung, aged 65.

DR. ANDREW DRYBROUGH, better known as Wa-ne-sho-ti, the Indian doctor, died October 20 at his home in Worthington, aged 60 years. He was a Scotchman by birth, and was a graduate of Edinburgh University. He spent many years among the Indians after coming to America, learned their language and practiced among them. Of recent years he had lived in retirement.

DR. JOEL M. PARTRIDGE, one of the pioneer physicians of northern Indiana, died at South Bend October 1, at the age of 75 years. Death followed a series of operations for a chronic ailment of long standing. Dr. Partridge was born in 1835, and began the practice of medicine after the Civil War, continuing until his fatal illness. Dr. Partridge served with distinction in the Civil War. His grandfather was in the Revolutionary army, being present when the British army under Lord Cornwallis surrendered at Yorktown. His father served in the Mexican War.

DR. J. LUCIUS GRAY died at the Holy Family Hospital in Laporte October 21 of cerebral meningitis, following an illness of two days. Dr. Gray was born in Vermont and was 51 years old. He graduated from the University of Vermont and in 1879 went to Chicago. After graduating from the Chicago Medical School he became an assistant in the coroner's office. Twenty years ago he came to Laporte, where he soon built up a large practice, and at death was considered one of the most successful physicians in northern Indiana. He was elected coroner in 1904, and appointed secretary of the county board of health in 1909. He took a leading part in the coroner's work in the Guinness case, being selected as one of the physicians to pass on the charred bodies, bones, teeth, etc., found in the ruins and in the private burial ground. He held that the charred bodies in question were those of Mrs. Bella Guinness and her children. He was one of the state's strongest witnesses in the conviction of Lamphere.

NEWS, NOTES AND COMMENTS

DR. J. I. RINNE has recently located at Lapel, Ind.

DR. FRANK L. TRUITT has removed his office to 325 Board of Trade building, Indianapolis.

DR. ELVA C. MACER and Miss Rena Rust, both of Evansville, were united in marriage Oct. 5, 1910.

DR. AND MRS. GEORGE J. COOK, of Indianapolis, are taking an extended trip through the Northwest.

DR. SAMUEL M. RIED, of Muncie, is recovering after being seriously ill at his home for several months.

DR. FREDERICK CHARLTON, of Indianapolis, who spent several months traveling through Europe, has returned.

THE regular meeting of the Thirteenth District Medical Society was held at Rochester, Wednesday, October 19.

DR. W. F. BATMAN, of Ladoga, has recently been elected vice-president of the Alumni of Jefferson Medical College.

DR. URBANA SPINK, of Indianapolis, is now in Europe pursuing a special course of study in diseases of the nervous system.

DR. HELENE KNABE has removed her office from 406 Board of Trade building to 503 N. Delaware street, Flat No. 2, Indianapolis.

DRS. A. C. KIMBERLIN, J. D. Reed, M. N. Hadley, J. D. Garrett and Goethe Link, of Indianapolis, spent September and October at Rochester.

DR. HARLAN E. MIZE, formerly of Kramer, Ind., has resigned his position with the Indiana Springs Company, and is taking a vacation in Pueblo, Colo.

THE Tenth Annual Commencement of the School for Nurses of Hope Hospital, Fort Wayne, was held in the High School Auditorium, Tuesday evening, Oct. 18, 1910.

MRS. OTA EASTMAN, wife of Dr. Thomas B. Eastman, died recently at her home, 2738 N. Meridian street, Indianapolis, after a nineteen weeks' illness with bronchitis.

DR. LOUIS A. BOLLING, who quit general practice in Fort Wayne several years ago to take up sanitarium work, has become medical director of Mudlavia, at Kramer, Ind.

WE desire to call attention to our department devoted to Commercial Announcements. Many of our readers may have overlooked this department, which offers practices for sale, etc.

THE directors of the Antituberculosis Colony, Pottowatomie Park, South Bend, have decided to make the cottages habitable for cold weather, and to keep the camp open during the winter months.

DR. CHARLES S. WOODS, secretary of the Indianapolis city Board of Health, recently returned from Milwaukee, where he attended the annual convention of the American Public Health Association.

DR. A. M. CALVERT, formerly of Indianapolis, who has been the resident physician of the

Ottawa Tent Colony, at Ottawa, Illinois, for the past year, has been made a medical director of that institution.

DR. JOHN SLUSS, of Indianapolis, is spending two months in Boston, in research work in the Harvard Medical School, in connection with his surgical work and the rewriting and editing of his book on Emergency Surgery.

DR. NELSON D. BRAYTON, who has been visiting his father, Dr. A. W. Brayton, of Indianapolis, has recently returned to his home at Phoenix, Ariz., where he holds an official position under the Government Indian Agency.

DR. C. C. HASKELL, of the research department of the Lilly Laboratories, has returned to his office in Indianapolis after an absence of about three months. Dr. Haskell spent the summer studying infants' diseases in the hospitals of New York City.

DR. HARRY C. SHARP, formerly surgeon of the State Reformatory at Jeffersonville, has formed a partnership with Dr. C. W. Dowden, of the West Baden Springs Hotel, and together they will manage a sanatorium which will be run in connection with the hotel.

DR. C. S. WOODS, city sanitarian, Indianapolis, announces that W. D. McAbee, former assistant food chemist for the State Board of Health, will become city chemist. Mr. McAbee succeeds J. C. Moore, who left the employ of the city to take a course at Columbia University.

A SWINDLER ABROAD.—Hotels, druggists, physicians, livery men and others, are warned against a man traveling from place to place presenting a card with the name "R. F. Hall" printed in the center. In the lower left hand corner are the words "Parke, Davis & Co." and in the lower right hand corner the words "Detroit, Mich." This man is described as follows: "5 feet 6 or 8 inches, 150 pounds, fiend for Turkish cigarettes, about 27 years, complexion medium, wears nose glasses and continually takes them off and on; he is a swell dresser, good talker, fine appearance, wears one of those light colored slip on or off rain coats." This individual has no connection with Parke, Davis & Co. and so far as heard uses the card to facilitate the passing of bogus checks. Because of incidents like these nearly all con-

cerns employing "drummers" forbid them to borrow money or seek credit, except upon individual responsibility and acquaintanceship. Therefore, those seeking credit or loans, especially from comparative strangers, on the strength of their alleged connection with some important concern, should be treated as imposters.

THE executive board of the Methodist Hospital, Indianapolis, Charles W. Fairbanks, chairman, has awarded the contract for the excavation and foundation work of the new pavilion addition of the hospital to the John A. Schumacher Company. This foundation work in preparation for the superstructure is to be completed by December 1. After consideration the Board decided that the pavilion to be erected on the south side of the present administration building would be insufficient for the increasing needs of the hospital and directed Vonnegut and Bohn, architects, to prepare at once plans for an additional pavilion to be erected on the north side of the present building. Each of these wings will cost approximately \$100,000, which, with the cost of the present building, will make, exclusive of the cost of the ground, an outlay of \$350,000. Each pavilion will be set forward of the main building 30 feet, thus forming an open court in front of the administration building. It is expected that the first pavilion will be completed and ready for occupancy on April 1, and the second pavilion a month later.

DR. W. H. WISHARD, who will be 95 years old on his next birthday, Jan. 17, 1911, recently returned to Indianapolis after a visit of eleven months with his son, George Wishard, at Minneapolis. One of the first things he did on his return was to take an automobile ride over the city. His first visit to Indianapolis was eighty-five years ago this month, when he was sent there on horseback by his father to purchase some door hinges for the cabin which he had just built. He had heard a great deal of talk in his country home about the new capital of Indiana, and was anxious to see it, not having any well-defined idea of what the vision would disclose. When he arrived at the present site of the union station he watered his horse in Pogue's run, and looking northward saw Indianapolis—a few straggling houses in the distance.

The death of Dr. P. H. Jameson leaves Dr. Wishard the sole survivor of the first members of the Indiana State Medical Association. Dr. Wishard gave up his practice several years ago.

but is in good health. He is strong in memory and keeps in touch with the affairs of the day.

THE Union District Medical Society Association, consisting of Butler and Preble counties, Ohio, and Union, Fayette, Franklin, Wayne and Henry counties, Ind., met in its regular semi-annual session Oct. 27, as the guests of the Oxford Retreat. It was a beautiful day and the classic town of Oxford was charming. The Retreat and The Pines were both in their glory. The association had been invited by Dr. George F. Cook, for many years superintendent of these institutions. Since the invitation was given he had died and the meeting became largely "in memoriam." Dr. Dan Millikin of Hamilton, Ohio, after the dinner delivered a scholarly and feeling address on the life of Dr. Cook. Dr. R. Harvey Cook, superintendent of the Oxford Retreat, was elected president and Dr. P. M. Sater, of Hamilton, was elected secretary and treasurer. The vice-president is chosen from the city in which the meeting is held, which will be Richmond, Ind. The address of the retiring president, Dr. C. S. Bond of Richmond, was very good as was also a paper on typhoid fever by Dr. D. E. Barnett of Homer, Ind. The other papers were: "Headaches," Dr. A. C. Carney, Hamilton; "Intestinal Toxemia," Dr. M. H. Mack, Chicago; "Paranoia," Dr. B. F. Beebe, Cincinnati; "The General Practitioner and the Specialist," Dr. Garrett Pigman, Liberty, Ind.

E. S. McKEE.

"How to Remove the Appendix" is the title of an article appearing in *Life* for Oct. 20, 1910. It is as follows:

Owing to the growth of this industry we herewith append a few first aids to the appendicitized, or appendicitiseized, as some prefer to spell it.

Just as soon as you discover a pain in the region of the stomach call up your bank and find out the status of your account. If your balance is written in black or blue ink you have appendicitis, provided it hasn't already been removed, in which case you will have to find another means of reducing both the pain and the balance. But if your balance is written in red ink you have merely eaten something which disagreed with you.

Having fully determined upon having appendicitis the rest is easy. Call the doctor. Do not call the surgeon, for that would disturb the system. The dear old family doctor starts it off. Before he finishes he will have called in all his friendly practitioners in consultation, and all his friendly surgeons in operation, meaning that some day, when you operate on your bank account for their benefit, there will be a boisterous meloncutting bee. Do not try to discover how much each one gets. Simply rest content that the

dear old family doctor knows what surgeons pay the best commissions—usually the poorest ones.

There are two things you shouldn't worry about. First, your life. The operation is simple. Otherwise the price would not be so high. And, besides, dead men pay few bills.

Secondly, do not worry about your bill. The dear old family doctor will attend to that, and it would do no good to worry. If you must worry, it is best to be broke in the first place.

At Logansport recently "Doctor" William Hope was arrested on the charge of violating a city ordinance which provides for a license fee of \$50 per day for the selling or offering for sale of any drug, medicine or remedy, by an itinerant. In default of bail Hope was placed in jail over Sunday and the following morning was fined \$50. Less than a week later another was arrested and fined on the same charge. Logansport is furnishing a good example for other towns and cities in her fight against frauds in the practice of medicine. A few years ago the license of one Dr. Dickerson, a medical advertiser, was revoked through the efforts of the Cass county society and other frauds are being investigated.

The ordinance through which convictions were made is as follows:

Section 1: Be it ordained by the Common Council of the City of Logansport, Indiana, that before any itinerant physician or other traveling person is authorized to practice or offer to practice as a physician or sell or offer to sell any medicine or other drugs or remedies used in curing and healing diseases or recommended for such use, within the city of Logansport, Indiana, such itinerant physician or other traveling person shall make application to the City Controller for a license granting such privilege, which application shall specify the number of days such itinerant physician or other traveling person intends to practice or offer to practice or sell or offer to sell such medicine, drugs or remedies therein and shall pay to the city treasurer fifty (\$50.00) dollars for each day said itinerant physician or other traveling person intends to practice or offer to practice or sell or offer to sell such medicine, drugs or remedies. The city controller upon presentation of a receipt for such payment shall issue a license for the number of days such receipt was issued.

Section 2: Any person or persons, firm or corporation or any person or persons acting as agent to any firm or corporation or person or persons, violating any provisions of this ordinance shall upon conviction thereof, be fined in any sum not less than fifty dollars or more than one hundred dollars for the first violation and not less

than fifty dollars or more than three hundred dollars for each subsequent violation.

Section 3: Nothing in this ordinance shall be construed to apply to traveling salesmen in the sale of medicine, drugs or remedies to bonafide druggists or physicians.

Section 4: This ordinance shall become in full force and effect on and after its passage and legal publication thereof.

SOCIETY PROCEEDINGS

ELEVENTH COUNCILOR DISTRICT

The sixth meeting of the Eleventh Councilor District Medical Association was held in Delphi, May 19, 1910.

A clinical session was held at 11 o'clock, at which vice president C. C. Angel presided. The following cases were presented:

Dr. Hill, of Logansport, presented a case of adenoids in boy 4 years of age, and described technic of operation in such cases. This boy presented a peculiar indisposition to walk previous to operation, which was afterward overcome.

Dr. Chas. H. McCully, of Logansport, presented a boy 18 months of age, who had been operated for intussusception. He described salient points of operation, and said that cyanosis followed administration of chloroform in this case, which did not improve with use of ether. Dr. McCully also presented case with injury of skull, man aged 57 years, who was hit by piece of flying emery. Wound dressed in usual manner, and repair was thought to have taken place. However necrosis occurred in outer table, which after curettement made excellent recovery. Dr. McCully next presented a child, 26 months of age, with fracture of skull. In this case some of the bone had been removed and a portion of periosteum turned into affected area. Furrow is gradually filling out.

Dr. C. C. Hickman, of Yeoman, presented some cases of valvular disease of heart. Cases had no history of acute infection at any time. Adjourned until 2 o'clock.

Scientific session called to order promptly, with President Fankboner in chair. All counties well represented. Minutes of last meeting read and approved.

Motion carried that amendment to Chapter 4, Section 2 of bylaws, with reference to duties of vice presidents, be accepted and committee discharged.

Dr. T. C. Kennedy was given privilege of floor, followed by report by Dr. McCully, chairman of the committee on harmonizing the different copies of the constitution. He said there were only a few minor changes to be made, and that the sense of all of them was identical. Committee discharged.

Dr. R. G. Daniels, of Marion, chairman of committee on Public Policy and Legislation made the following report:

We, your committee on Public Policy and Legislation wish to commend the committee of the state association in their past and present endeavors to further the sanitary conditions to preserve the health of the commonwealth of Indiana. We also commend all the other states and national associations engaged in this

line of endeavor. We further recommend that the State Board of Health look into the matter of the kind of drinking water being proffered the public on inter-urban trains in this state. We also approve the effort now being made in the national congress to establish a Department of Public Health, and instruct our secretary to communicate the same to our representatives there. Report accepted.

Resolution introduced that the condolence of the association be extended to Dr. J. P. Hetherington, of Logansport, and Dr. W. F. Sharrer, of Delphi, on account in each instance of the recent death of the wife. Resolution adopted.

Dr. John Spooner, of Peru, introduced the following resolution: WHEREAS, Dr. Howard T. Rickets has met an untimely death from typhoid fever contracted while doing research work on Typhus Fever, and has thus become one of the martyrs of medical science, be it

Resolved, that the Eleventh Councilor District Medical Association of Indiana take notice of his passing and express its appreciation of the great work he has done, and regret that his life should be lost. Resolution adopted.

Dr. Chas. H. McCully then addressed the meeting, speaking of his pleasant relations with the county societies of the district, and the eleventh district organization itself. He said that he expected to resign as councilor and requested the recommendation of a successor. Motion carried that this be made a special order of business to come immediately after the scientific program. Committee of one from each county represented was appointed to select a name.

Following the invitation of Dr. John Spooner, of Peru, it was decided that the Association should be the guest of Miami County at its next session, the third Thursday in October.

The scientific program began with an address by the president, Dr. W. A. Fankboner, of Marion, which was followed by a paper entitled "Adenoids," by Dr. J. E. Johnson, of Marion. The essayist said that the pharyngeal tonsil is a normal physiologic structure, composed of lymphatic tissue identical with the lymphoid tissue in any other part of the body. It is present at birth, reaches its greatest size by the eighth year and is atrophied and disappeared by the fifteenth year. Its function, it is safe to assume, is one which concerns early life. When the pharyngeal tonsil, because of pathologic changes, increased size or its position in the nasopharynx, gives rise to certain morbid phenomena, it is spoken of as an adenoid. Heredity plays an important rôle in causing adenoids, and certain families exhibit a tendency to lymphatism. Other predisposing factors are such constitutional diatheses as the tubercular, strumous or rickety, which tend to induce acute and chronic inflammatory hypertrophy of the lymphatic tissue. Of active causes the specific fevers stand first, such as scarlet fever, measles, diphtheria and the grippe. The symptoms of adenoids are snuffles, mouth-breathing, recurrent colds and otitis media. Most ear-aches in children under 10 years of age are due to adenoids. The thickening or muffled tone of the voice is another symptom, as also mouth-breathing at night, which induces anemia. There is but one treatment for adenoids and that is removal by surgical means.

In the discussion Dr. L. W. Jordan, of Wabash, said that surgery is the only remedy. The condition is a house disease, which is an infection, and at times

catarrhal. He recommends the free ventilation of rooms, and the teaching of the child to keep the mouth shut, and to lie on the side to promote this latter end.

Dr. M. H. Krebs, of Huntington, said there should be complete narcosis to facilitate complete removal of all small particles of growth. He prefers ether anesthesia, because it is safest, and follows with general alternatives.

Dr. F. B. Hill, of Logansport, recommends early operation to save catarrh and deformity of face. He said that the skull between the base of the cranium and the palate bone is not fully developed. We find a V-shaped palatal arch, and that part of the cavity of the mouth ought to be in the nose.

Dr. Fretz, of Deedsville, recommended doing the operation without an anesthetic and with the finger nail.

Dr. Chas. Wright, of Huntington, preferred ethyl chloride, as he said he thought it the ideal anesthetic.

Dr. J. F. Loomis, of Marion, prefers either ethyl chloride or ethyl bromide, the patient in sitting position.

Dr. R. E. Troubman, of Logansport, called attention to the pernicious habit of thumb-sucking and the pacifier in the causation of this disease.

In closing, Dr. Johnson recommended ether as the safest of all anesthetics.

"Our Obligations to Children of School Age," was the title of a paper read by Dr. R. Q. Taviner, of Huntington. This paper was a plea for the medical inspection of school children, and urged that the medical profession, by agitation and teaching, make every endeavor to induce the state to adopt medical inspection as a regular feature. The great problem of the school man is to keep the pupils in school until they have completed the course. Pupils who are retarded for one or more causes drop out of school as soon as the age limit is reached. The state loses very seriously because of this premature loss of the pupils' training in the school. There are three phases of the medical inspection of school children—sanitation, contagious diseases and physical development. Sanitation concerns inspection of the surroundings of the children. It looks after the location of the buildings, their proper construction with regard to ventilation, light, sewage and their beautification. The second stage is the inspection of children to determine the presence of contagious diseases. This is the basis of practically all of the reasons for medical inspection of school children. The inspection of school children for the detection of contagious diseases accomplishes a great saving of time and energy. The spread of contagious diseases is checked and the pupils are placed in school again in a shorter period than otherwise would be possible. Disinfection is also carried out with greater thoroughness. The spread of tuberculosis is checked by the removal of the carriers. In the inspection of children of school age to control such chronic conditions as adenoids, hypertrophied tonsils, eye-strain, and to note and control the physical development of pupils, the state does not receive such a marked direct benefit, but it is as important as the other phases of medical inspection. Indiana is just beginning to take hold of the question of medical inspection of schools, and a few of the cities already have medical inspectors; and Indianapolis at one time had medical inspection, but at present there is a quarrel between the city council

and the school board, and in consequence nothing is being done. Fort Wayne has an excellent system of medical inspection of schools. The state of Indiana lays claim to one of the most perfectly organized school systems in the United States. In order to maintain her reputation as an educator in the fullest sense of the term, she must take a forward step and train the body as well as the mind. Indiana not only claims a high reputation as to her public schools, but also has a high reputation over the entire country as to the care of her defective children. These children who are not up to the normal and are members of the public school system need care and attention just as much as those who are totally incapacitated for usefulness. Would it not be better to spend a little money to relieve a child who suffers from partially defective sight or hearing or some malformation of the skeleton, than to spend it on one who is totally deaf or blind, or totally deficient mentally?

Dr. O. J. Ward, of Peru, moved that the paper be given to the *Star* and *News*, two papers published at Indianapolis, for the purpose of general distribution to the public. Motion carried.

Dr. Henry Ader, of Somerset, believes children are sent to school too soon. They do not get enough exercise and do not breathe enough.

Dr. Grant Goodwin, of Monticello, said that to get medical inspection of schools we have to work with the school authorities and not with the politicians.

Dr. R. E. Troutman, of Logansport, said the physicians should be paid for school inspection, while Dr. L. H. Connolly, of Gas City, held the opinion that it should be done gratis, and after the people become educated we would get the laws.

Dr. H. B. Hill, of Logansport, recommended that consent be gained to have the physicians lecture to the school children while the mind is young and absorbing, when they will accept things as facts. They will afterward make good lawmakers.

Discussion closed by Dr. Taviner.

A symposium was next on the program.

(1) Autointoxication from the Alimentary Canal, by Dr. P. B. Carter, Peru. (2) Autointoxication from the Excretory Glands, by Dr. C. C. Campbell, Walton.

In the discussion Dr. G. E. Hoffman, of Longcliff, said that autointoxication was frequently found in the insane and that the intensity of the insanity was frequently abated when the intoxication could be relieved even in part. Gigantism and acromegalia are due to autointoxication, as also arteriosclerosis, anemias, high blood pressure, cold hands and feet, coated tongue, mental depression and many other symptoms. These cases are as a rule promptly relieved when good elimination is established.

Dr. Chas. Wright, of Huntington, laid stress upon the importance of having good elimination before operation, thereby preventing autointoxication at a critical time. On the other hand, by doing certain operations on different organs we can put the parts in normal condition and prevent autointoxication. For instance the removal of the appendix or drainage of the gall-bladder, etc.

"Prevention of Sepsis in Labor," was the title of a paper by Dr. Grant Goodwin, of Monticello. The essayist said that sepsis either in the mother or the newborn babe is a pathologic condition caused by an infection in some manner being introduced into the human organism and therein generating a poison or

toxin which in turn gives rise to certain signs and symptoms easily recognizable. All septic infection is preventable, and the physician is to blame if infection occurs in labor. It is the duty of the physician to see, forestall and prevent any infectious material entering into the system during the act of parturition or following the same, and it can be done by the careful application of the means which we have at our command. To prevent sepsis in confinement it is necessary that the physician himself and everything which comes near or in contact with the parturient woman shall be surgically clean. The instruments, dressings, clothing, solutions, the hands, and particularly the finger nails of the physician must be surgically clean if infection is to be guarded against. The essayist called attention to the best manner of preparing the woman who is about to be confined, and enumerated the instruments and appliances which go to make up an obstetrician's outfit for the usual case of labor. He also mentioned the necessity of immediate repair of perineal lacerations and proper care of the new born babe to prevent ophthalmia neonatorum.

Dr. E. H. Andrews, of Peru, directs that his patients take an enema, as the colon bacillus is a frequent cause of the infection. He does not believe in examining the patient too often and condemns the use of the vaginal douche unless positively indicated. The paper was further discussed by Drs. G. W. Daniels, of Marion, Fretz, of Deedsville, and Connelly, of Marion.

The committee appointed to select a counselor for the Eleventh District, to fill the unexpired term of Dr. McCully, unanimously favored the name of Dr. Maurice H. Krebs, of Huntington.

Promptly at 6 o'clock a banquet was held for the doctors, their wives and friends. Toastmaster, Dr. Chas. E. Angel, Delphi. "The Man at Your Elbow," Dr. H. Miller, Marion. "Does it Pay?" Dr. Jared Spooner, Peru. "An Amateur's Experience in Automobiling," Dr. G. D. Miller, Logansport. "Experience of a Country Doctor," Dr. A. J. Chittick, Burlington.

Adjourned. M. H. KREBS, Sec.

The Eleventh Councilor District Medical Association met in Peru Oct. 20. The visiting members and their wives were entertained at luncheon by the ladies of the Presbyterian church.

The scientific meeting was called to order at 2 o'clock by the president, W. A. Fankboner of Marion. The minutes of the last meeting were read and approved, also the financial report of the secretary-treasurer.

The following officers were elected: president, Dr. H. M. Hall, Camden; secretary-treasurer, Dr. James L. Gilbert, Logansport.

Upon invitation it was decided to hold the next meeting in Logansport next May.

A committee composed of Dr. P. B. Carter, Dr. R. A. Blount, and Dr. J. C. Fretz reported resolutions upon the death of Dr. Jared Spooner as follows:

WHEREAS, It has pleased Almighty Providence to remove from our midst Jared Spooner, a charter member of this society, be it

Resolved, That this society take notice of his death and hereby express its sense of loss.

Dr. Jared Spooner was born in Noble County, Indiana, in 1846 and died in Peru, Ind., Sept. 25, 1910. He graduated from the medical department of the University of Michigan in 1871 and from the University of Pennsylvania in 1890. He was married to Mary E. Ford of Auburn, Ind., in 1871. He died survived by his wife and two sons, one of whom, J. P. Spooner, is now a practitioner in Peru and a member of this society.

Dr. Spooner was a man of splendid intellectuality and estimable private character. He was a close student of medicine and deeply interested in the uplifting of the medical profession. His death is a sad loss to all and his presence and work will be greatly missed among his professional brethren.

Resolved, That this society extend to his family its deepest sympathy in their bereavement.

P. B. CARTER,
R. A. BLOUNT,
J. C. FRETZ,
Committee.

The following scientific program was then given:

Needed Medical Legislation.....C. R. Daniels, Marion
Discussant.....W. H. Galbreath, Rockfield
Ascites.....C. C. Hickman, Yeoman
Discussant.....W. H. Brodbeck, Huntington
Leucorrhea: Causes and Treatment.....
.....W. A. Spencer, Wolcott
Discussant.....L. S. Wallace, Bunker Hill
Empyema.....W. A. Domer, Wabash
Discussant.....Joseph Rubsam, Logansport
Use of Ergot in Obstetrics.....C. H. Good, Huntington
Discussant.....O. W. McQuown, Marion
Salicylic Acid and its Preparations.....
.....R. E. Troutman, Logansport
Discussant.....C. R. Clayton, Monon
The meeting then adjourned and immediately repaired to the Baptist church where a fine banquet was served and the following toasts given:
Toastmaster.....J. Z. Powell, Logansport
The Doctor as a Psychologist.....
.....Z. M. Beamen, North Manchester
The Future Doctor.....H. B. Hill, Logansport
The Doctor's Social Relation to His Patient.....
.....H. M. Hall, Camden
The Doctor's Wife.....Mrs. J. C. Fretz, Deedsville
Preventive Medicine.....C. B. Vigus, Marion
Cranks.....M. H. Krebs, Huntington

THIRTEENTH DISTRICT MEDICAL SOCIETY

The twelfth semi-annual meeting of the society was held at Rochester, October 19.

The meeting was called to order by President C. J. Loring of Rochester. The minutes of the previous meeting were read and approved. The scientific program was carried out as scheduled. The society has been fortunate in both of its last meetings in having every man who was down for a paper keep his obligation by being at the meeting with his paper. Those on the program this year were Dr. C. W. Haywood, Elkhart; C. C. Terry, South Bend; J. W. Eidson, Plymouth; H. O. Shafer, Chicago; C. A. Daugherty, South Bend, and J. C. Fleming, Elkhart. The discussion was entered into by men from all over the district. During an intermission, punch was served and the society was entertained by Mr. H. J. Irvin and wife of Rochester; Mr. Irvin singing a solo, accompanied by his wife on the piano.

The following officers were elected for the ensuing year: President—Dr. I. J. Becknell, Goshen; vice-President—Dr. J. J. Thomas, Winamac; Secretary-Treasurer—Dr. C. N. Howard, Warsaw.

At the banquet in the evening, the following toasts were given, with Dr. Charles Stoltz, South Bend, as toastmaster: "Butting In," Dr. B. W. S. Wiseman, Culver. "Vagaries of Medicine," Dr. I. J. Becknell, Goshen. "Early Reminiscences," Dr. Wm. Kelsey, Monterey.

The day was ideal and lent itself to automobiling, by which means many came to the meeting—returning

home by moonlight. The attendance was the best the society has ever had—seventy-four registering and fifty-eight remaining for the banquet.

The Fulton County Medical Society saw to it that the arrangements were satisfactory and the visiting members were made to feel at home, which added much to the enjoyment of a very profitable meeting.

The next meeting will be at Elkhart in the Spring of 1911.

C. NORMAN HOWARD, Sec.

ALLEN COUNTY

FORT WAYNE MEDICAL SOCIETY.

(Meeting of Sept. 13, 1910)

Society met in regular session in Assembly Room, with eighteen members present.

Dr. W. D. Calvin reported a case of ophthalmia neonatorum. Mother had no increased temperature in connection with child-birth. Hypodermics produced marked oedema. Child's eyes cared for by interne, and supposedly a 1 per cent. solution of silver nitrate used. Babe born at 3 p. m. Ophthalmia first observed at 10 p. m. the same day, and the next morning there was marked swelling, most pronounced about right eye. Day after delivery there was a membrane over cornea, with haziness of cornea. Examination showed no gonococci. Dr. Wheelock called in, and thought condition might be diphtheritic, so antitoxin was administered, but with no effect. Later there were skin manifestations and breasts were hardened; the woman also showed a few spots during convalescence. Was put on mercury inunctions, and rapid improvement of both followed, with marked improvement of child's eyes. Mother's heart lesion much improved and eruption disappeared; cough also disappeared. Mother stopped mercury inunctions on babe and eruptions reappeared. Diagnosis syphilis in mother and babe.

Dr. Bulson opened discussion, followed by Drs. Morgan, Havice, Rhamy, Gilpin, Dancier, and closed by Dr. Calvin.

Board of Censors reported favorably on application for membership of Dr. Gardner, and on motion secretary cast ballot of society for Dr. Gardner's election.

Dr. Bulson made motion that members of the Fort Wayne Medical Society wear a designating badge at state meeting showing that they belong to the society, each member being constituted a member of reception committee. Carried.

Adjourned.

J. C. WALLACE, Sec.

C. R. DANCER, Sec. pro tem.

(Meeting of September 20)

Society met in regular session in County Health Officer's office, with twenty-six members present. Minutes of previous meeting read and approved.

Dr. E. A. Crull read a paper on "Pleurisy."

Discussion by Drs. Chas. G. Beall, E. J. McOscar, Allen Hamilton, B. Van Sweringen, Weaver, Porter, and closed by Dr. Crull.

Mr. Charles H. Worden spoke on "The City Beautiful," first discussing the water-supply. He said that physicians can be of marked assistance in securing an adequate and sufficient suitable water-supply. There is a question as to whether the deep rock well water is suitable to put into the stomach of human beings when it has such a bad effect on boilers. The water

in the St. Joseph river is soft. He next mentioned drainage, and said he believed we would soon have to abandon the disposal of sewage in rivers. By keeping sewage out of rivers it may be that rivers may serve as reservoirs for water-supply. He said that to make parks, boulevards and playgrounds will be of marked benefit to the city and citizens.

Discussed by Dr. Porter, who said that a beautiful city of necessity means a healthful city, as beauty makes the individual want to live, and this aids markedly in combating disease. Sewage problem should be looked into.

Dr. Buehman said there were no colon bacilli in the city water at present. No adequate sewage system.

Also discussed by Drs. B. Van Sweringen, who said that the politics should be cleaned up; W. D. Calvin, who said that municipal offices should be filled by men of merit, also Drs. Crull, McOscar and C. E. Barnett. Closed by Mr. Worden.

Dr. Porter moved a vote of thanks to Mr. Worden, and, through him, extending the assurance that we are in hearty accord with the Civic Improvement Committee's plans.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Oct. 4, 1910)

Society met in regular session at the Lutheran Hospital with twenty-two members present.

Dr. H. A. Duemling reported three cases of self-inflicted injury to uterus in young pregnant women.

(1) Woman, 22, supposed herself pregnant. Introduced instrument into uterus, and immediately became violently ill. Physician diagnosed threatened abortion. When seen by her physician, she was in collapse, uterus tender, and there was bloody discharge. Dr. Duemling called and made diagnosis of ruptured tubal pregnancy. On operation found hole in posterior part of uterus and pregnancy had gone through this hole. Removed pregnancy, closed hole in uterus and put in drain. She lived seven weeks and died of a sepsis.

(2) Woman had perforated posterior cul de sac with scissors. On examination found intestines and omentum sticking through hole. She died of sepsis.

(3) A stiff catheter had been introduced into uterus, and the woman immediately went into collapse. Became very tympanitic. Case went on for about five weeks when she developed chills. Was delivered into hospital at end of five weeks. Vaginal examination showed mass filling pelvis. Temperature 100-102. Diagnosis pelvic abscess. Opened belly, and after separation of omentum there was a rush of gas, then pus welled up, there being all of two pints. Introducing hand into mass, got pregnancy and delivered same. Dr. Duemling termed this traumatic extra-uterine pregnancy.

Dr. Duemling presented specimens, uterus, tubes and ovaries (hysterectomy). This woman had been submitted to severe forceps delivery six years ago without anesthesia. Uterus was removed on account of extensive laceration of cervix, pain, etc. On removing uterus found one ovary attached to uterus by very much attenuated string of tissue. Dr. Duemling thinks that the attenuated string of tissue is probably tube that had been subjected to very severe pulling down at time of forceps delivery.

Specimen 2. Ovarian pregnancy. Shows ovary distended sheltering pregnancy.

Discussion by Dr. Porter. Closed by Dr. Duemling.

Dr. A. L. Schneider presented specimen. Mother of child, aged 28; fourth pregnancy. Child born Aug. 26, 1910, before Dr. Schneider arrived. No history of anomalies in family on either side. Child lived three hours after birth. Has three fingers and thumb on each hand, and four toes on each foot. Is a hermaphrodite. On opening apparent anencephalus find that the vault of cranium is closed.

Dr. S. V. Wilking reported a case of twin pregnancy in which one fetus died at three months. After delivering the afterbirth he found attached to amniotic membrane a fetus of three months. Soft parts absorbed and bony structures flattened. Was also an apparent attenuated afterbirth.

Discussion by Dr. Morgan.

Dr. Crull reported that the Board of Health had decided that cases of poliomyelitis must be reported and quarantined. Dr. Morgan made motion, which was carried, that the society commend the Board of Health in taking prompt action in reference to quarantining poliomyelitis.

Adjourned to luncheon.

J. C. WALLACE, Secretary.

(Meeting of Oct. 11, 1910)

Society met in regular session with thirty-two members present. Minutes of two previous meetings read and approved.

Clinical cases. Dr. J. S. Boyers reported five cases of poliomyelitis. All five patients were constipated. First symptoms were such as would seem to make one think of biliousness. These five complained of pain in legs, more especially at night, and more during rainy weather. No pupillary change in any of the five cases. They were all in different parts of town, except in the one family where there were two cases. Two cases had very severe cerebral manifestations. Dr. Boyers said that all of his cases will probably make complete recovery. He cleaned out intestinal canal with calomel. Gave urotropin every six hours, and if necessary gave bromids. When acute stage was passed, used hot packs and friction on limbs.

Discussion by Drs. Van Buskirk and McCaskey.

Dr. McCaskey reported cases illustrating importance of extra-gastric causes of vomiting simulating malignant gastric vomiting.

Case 1. Was practically normal save for mass in pelvis.

Case 2. Man in ordinary health suddenly began to vomit, and kept it up. Vomitus showed nothing. History of failing health for two or three months. There was sudden suppression of urine and death.

Dr. Bulson reported cases.

Case 1. Diphtheria. History of cough and catarrhal trouble since July. Had difficulty breathing through nose. Examination showed membrane in nose and slight patch in throat. Culture made from membrane and diphtheria reported. Gave patient 5,000 units antitoxin. Never any rise of temperature and case was apparently not sick at all. Recovery.

Case 2. Girl referred for obstruction in breathing. Examination showed enormous mass of adenoids and two large tonsils. Noticed that patient had little cough, but history stated that she had had this for some time. Was operated on and next morning had a temperature of 103½, and nurses reported suspicious eruption. Father insisted on taking child home, and she developed measles. Made an uneventful recovery.

Of Course, had there been any suspicion of measles, operation would not have been performed.

Dr. M. I. Rosenthal presented a paper on Malignant Obstruction of Bowel to be operated, making anastomosis rather than colostomy. He drew the following conclusions: (1) Obstruction of the bowels due to carcinoma is not hopeless as to cure by radical operation. Incomplete excision of all cancerous tissue must necessarily result in recurrence of the growth. (2) Anastomosis without resection of the malignant growth should be the operation of election in obstruction due to cancer, when the radical operation, that is complete excision, is impossible. (3) Anastomosis without resection low in the pelvis, when the bowel is accessible with difficulty, can be successfully accomplished by the assistance of the Murphy button. (4) Anastomosis without resection probably bears the same relation to cancer of the bowel as does gastroenterostomy to cancer of the pylorus. (5) The clamp and suture method of bowel anastomosis is practical, rapid and trustworthy, and applicable in a large variety of bowel cases requiring resection or anastomosis. He described with charts his method of clamp and suture anastomosis.

Discussion by Drs. Porter, McOsear, Stemen and McCaskey. Closed by Dr. Rosenthal.

Adjourned. J. C. WALLACE, Secretary.

ELKHART COUNTY

The Elkhart County Medical Society met in regular session at Nappanee, Thursday, October 13, with thirty-seven members present, the meeting having been postponed from the Thursday previous on account of the extremely bad weather. This was the banner meeting of the society in years, there being more than double the usual number present.

Dr. M. D. Price, of Nappanee, read a paper on "Pathology and Complications in Typhoid;" Dr. Goodrich, of Elkhart, on "Early Injuries and Treatment of the Eyes;" and Dr. Stauffer, of Elkhart, on "Cause and Treatment of Typhoid Fever."

The discussion on typhoid brought out a number of reasons for the prevalence of the disease. It was advanced that the celery plant was a means of conveying the disease. The fly, milk and bad water are resourceful on the same line. The society in general believed that a county laboratory should be established and operated by men trained in sanitary and bacteriologic work for the promotion of health. It was also the consensus of opinion that the health department should be removed from politics. In one instance of typhoid prevailing at Elkhart some time ago, it was traced directly to one dairyman, who it was found was in the habit of washing his milk cans from an open well by the side of which was located a cesspool.

Drs. Slabough, Mullenery and Basseler were admitted to membership in the society.

Adjourned. A. A. NORRIS, Sec.

GRANT COUNTY

The regular October meeting of the Grant County Medical Society was held at Pt. Isabelle, Ind. This was the third of the migratory meetings held this fall. The purpose of these migratory meetings is to stimulate interest in the society.

Dr. Netta B. Powell read a paper on Public Health and Education. Dr. H. S. Jeffreys presented an interesting paper on Angina Pectoris.

The attendance at these migratory meetings has been good. The trips have been made in automobiles, and everyone has had a fine time.

At the close of the scientific session, supper was served by the ladies of the local church.

Adjourned. V. V. CAMERON, Secretary.

KOSCIUSKO COUNTY

The October meeting was held on the 25th instant. An invitation from the Ft. Wayne Medical Society for Nov. 1 was appreciated by the society, such members who could arrange to do so, expecting to attend. Dr. Howard, as Secretary-Treasurer, moved that a permanent auditing committee be appointed. The motion was seconded and carried. President Yocum then appointed Drs. J. W. Hefley, Mentone; N. A. Cary, Silver Lake, and J. H. Bowser, Syracuse, as members of this committee. Dr. DuBois, Chairman Program Committee, moved that the president appoint the program committee very shortly, so that the committee would have more time to work prior to the advent of the new year. Motion seconded and carried. A motion to raise the dues one dollar to meet the increased state dues was by unanimous consent deferred until the November meeting. Should the motion pass at the November meeting, each member will have to be so informed, under the constitution, and the final passing on it not come until the December meeting. It was felt that in doing it in this slow way each member will have ample opportunity to oppose or approve and the final result will be the real wish of the society.

Dr. F. J. Young of Milford read a paper on "Hemorrhoids." In the discussion, Dr. Cary, Silver Lake, spoke of the simplest surgical treatment being all that was necessary in many cases—just a matter of opening the vein turning out the clot and packing it with a little ointment. He pointed out, however, that there are other hemorrhoids which cannot be relieved in that way and some other method has to be employed such as the subcutaneous ligation. In a general way he believed that many physicians find hemorrhoids one of the most bothersome pathologic conditions with which they have to deal.

Dr. McDonald, Warsaw, said: "It is hard to figure out what the causes for hemorrhoids really are in many cases. Probably the anatomic conditions are the most frequent causes." He used to do the ligation method, but during the last three years has used the clamp and cauterization with equally good success. Both of these methods have given him good results, the patient never having complained to him of a return in a series of nearly a hundred operations for hemorrhoids.

Dr. DuBois, Warsaw, amplified what had been said about anatomic conditions, pointing out that these veins were not only long and had no valves, but there was a hyperplasia of connective tissue around the hemorrhoid with a subsequent development of small new blood-vessels, until the pile tumor becomes in reality an angioma.

Dr. Howard, Warsaw, spoke of the value of local applications of ice to the anus to relieve the pain. He advocated a careful search for the cause of the hemorrhoids and the removal of that cause, if possible; believing that the removal of the effect as represented

by the pile would not safeguard the future welfare of the patient so well as if it were coupled with the removal of the cause, which might otherwise in time produce its former effect. It may be impossible to find the cause; or if found to remove it.

Dr. Scott, Hecla, said: "Simple treatment will not cure. The conditions will have to be cured before a case of hemorrhoids can be called cured."

Dr. Young in closing the discussion said: "If you take away the causes and keep them away a sufficient length of time you will get some results—but that is a difficult thing to do." He spoke of the simple dilatation of the sphincter being the best single help we have in the cure of piles.

President Yocum, Mentone, read a paper on "Minor Surgery." Dr. McDonald spoke of the value of making a good, big incision in opening an abscess. Dr. DuBois believed that ethyl chloride had a limited use as an anesthetic. Dr. Cary spoke of the value of somnoform as an anesthetic in minor surgery. He has used it with satisfaction. The patient is anesthetized in 20 to 30 seconds. He will remain unconscious for 70 to 80 seconds. It is long enough to open an abscess. There are no bad after effects. Dr. Ford, Syracuse, believed somnoform was all right for very short work. Dr. Long, Pierceton, spoke of the danger sometimes coming from the use of cocaine. It has been found that sometimes about six drops of a 2 per cent. solution injected hypodermically has produced severe reaction. Dr. Anglin, Warsaw, spoke of the possibility of sometimes doing a little of the minor surgery without any anesthetic. Dr. Young described a method he had used satisfactorily in which he drains a boil through a small incision by piston suction through a glass tube.

Adjourned.

C. NORMAN HOWARD, Sec.

SPENCER COUNTY

The regular meeting of the Spencer County Medical Society was held October 18. Minutes of last meeting read and approved.

A number of interesting clinical cases were reported. Dr. H. Q. White read a paper on Hemierania, giving the results of using migraine preparations in the relief of this condition. Discussion.

The other members on the program being absent, the society discussed topics of general interest. Drs. S. C. Lang, H. G. Weiss, and Eva J. Buxton were appointed to arrange the program for 1911.

Adjourned.

H. Q. WHITE, Sec.

WHITLEY COUNTY

The Whitley County Medical Society held its regular meeting November 1, in the Court House, Columbia City, at 1:30 p. m. The following papers were presented: "Diagnosis and Treatment of the Diseases of the Ileocecal Region, Including Appendicitis," H. A. Duemling, Fort Wayne; "Pathology, Symptoms and Treatment of Burns, with Case Report," G. W. Anglin, Warsaw; "Medical Knots," F. G. Grisier; "Professionalism," Jesse H. Briggs.

Immediately after the meeting, Dr. Alice B. Williams served luncheon at her home on West Van Buren street.

Adjourned.

ALICE B. WILLIAMS, Sec.

BOOK REVIEWS

RUSSELL SAGE FOUNDATION. *THE CAMPAIGN AGAINST TUBERCULOSIS IN THE UNITED STATES.* Including a Directory of Institutions Dealing with Tuberculosis in the United States and Canada. Compiled under the Direction of the *National Association for the Study and Prevention of Tuberculosis*, by Philip P. Jacobs. New York. Charities Publication Committee, 1908. Cloth. Pp. 467. Price, \$1.00.

This volume, offered for the exact cost price of its publication, is issued solely in the interests of the study and prevention of tuberculosis. It consists of a directory of all the institutions and organizations dealing with tuberculosis, a digest of all legislation regarding it, etc. By means of it a person can ascertain the part taken in the campaign by his state and city; and inform a victim concerning the terms and entrance requirements of any or all the sanatoria on this continent which deal exclusively with tuberculosis. It is certainly a convenient means of reference for any medical man.

NORMAL HISTOLOGY. By George A. Piersol, M. D., Professor of Anatomy in the University of Pennsylvania. Eighth Edition. J. B. Lippincott Company. Philadelphia and London, 1910. Cloth \$3.50.

Piersol's Histology in its new edition appears opportunely at this time when medical schools are beginning their year's work. The usual conciseness, combined, however, with sufficient fulness to impress important detail, characterizes the volume.

The histologic descriptions are prefaced with brief accounts of the macroscopic appearance of the various organs and tissues. This assists very materially in correlating the demonstrations seen in the dissecting room and those studied under the microscope.

The importance of very accurate illustrations of the usual histologic findings has been appreciated by the author. The publishers have succeeded in making the plates particularly clear, and have thus aided largely in furthering a very necessary acquisition to a work of this kind.

NURSING IN DISEASES OF THE EYE, EAR, NOSE, AND THROAT. By the Committee on Nurses of the Manhattan Eye, Ear, Nose and Throat Hospital, New York City. Philadelphia and London: W. B. Saunders Company, 1910. Cloth, \$1.50 net.

There are few adequate text-books on nursing in diseases of the eye, ear, nose and throat. The difficulty of presenting a work that will be comprehensive to all of the nursing profession, the preliminary education of whose members varies so greatly, has been overcome by the committee to whose efforts this volume is due, in presenting the subjects in a popular style and yet with accuracy.

The first third of the book is given to general considerations of disinfection, preparation for and conduction of operations, and further care of the patient. Then follow consecutively divisions on the eye, the ear, the nose, and the pharynx and larynx. Each section

has a preliminary chapter outlining the anatomy and physiology of the special organ with which it deals.

The book is abundantly and well illustrated. It will serve as a most useful text in training schools as well as a convenient reference book for the graduate nurse.

THE ESSENTIALS OF MATERIA MEDICA AND THERAPEUTICS FOR NURSES. By John Foote, M. D., J. B. Lippincott Company. Philadelphia and London, 1910.

Many of the books on materia medica and therapeutics for nurses have been such that to gain a comprehensive knowledge of the subject from the text a familiarity with the sciences of chemistry and pharmacology must be presupposed.

This small volume is divided into five parts, with chapters devoted to the following subjects: (1) Definitions, (2) Weights, (3) Important drugs and medicines, (4) Hypodermic and rectal medication, (5) A reference list of commonly used drugs, chemicals and proprietary medicines, (6) Therapeutic definitions. The essentials only are given, so that a working knowledge is easily attainable without having to read through and study much detail information not of practical importance. For emphasis words and sentences of greatest consequence are italicized. At the end of the minor divisions in each chapter are a series of questions.

This manual no doubt will be well received in nurses' training schools.

GYNECOLOGICAL DIAGNOSIS. By Walter L. Burrage, A.M., M.D., Instructor in Gynecology Harvard University, etc. New York and London. D. Appleton & Company, 1910. Cloth, \$6.00. Half leather, \$7.00.

So many texts upon operative gynecology are deficient in full diagnostic accounts. This book is written from the clinical point of view, with the salient points of the anatomy and latest views of the pathology summarized at the beginning of each chapter. Throughout the volume are extensive discussions and tables of differential diagnosis.

The chapter on diseases of pregnancy, both normal and abnormal, including abortion and hydatidiform mole, is an extremely important one because of the many mistakes in diagnosis made in this field. Separate sections are given to diseases of the rectum and bladder. The author's extended experience with cystoscopy makes the observations regarding the urethra, bladder and ureters particularly instructive. Gynecologic affections of infancy and childhood form an interesting and profitable chapter to the general practitioner. It is within recent years that pediatricians have discovered the importance of different affections of the uterine organs in children and have called attention to the points in diagnosis.

The closing chapter on the menopause deals with this physiologic period in all of its varied aspects and is an intelligent discussion of a complex condition concerning which there is yet much misconception.

A complete alphabetical index of the illustrations is given in the front of the volume. The illustrations are well selected and are of much assistance in the elucidation of the text.

HANDBOOK OF DISEASES OF THE EYE. By Harry Caldwell Parker, M.D., Clinical Professor of Ophthalmology, Indiana University School of Medicine; Ophthalmic Surgeon to St. Elizabeth's Hospital, etc. Illustrated with 115 text engravings, a half-tone frontispiece and five full-page chromolithographic plates, with 26 figures. F. A. Davis Company, Philadelphia, 1910.

This is a very practical small text book for the use of students and general practitioners. The text is concise, sufficiently comprehensive without being burdened with unnecessary detail, and arranged with the subjects following in logical sequence. The results of recent investigations and their practical application are given due prominence. A special chapter on the bacteriology of the eye has been included, as also special chapters on the relation of the accessory sinuses of the nose to diseases of the eye, and the relation of the eye to general diseases. Under the chapter on diseases of the sclera the author discusses the eye and skin tests for tuberculosis and tuberculin therapy. A final chapter is devoted to formulary, forty-one practical prescriptions being given. Many good illustrations, several of which are in colors, are an aid to a better understanding of the text. The flexible cover, rounded corners of the leaves and excellent quality of type and paper are distinct advantages in a volume intended for constant use.

THE PRACTITIONER'S CASE BOOK. For Recording and Preserving Clinical Histories. Prepared and Arranged by the Editorial Staff of the Interstate Medical Journal; 286 pages; full cloth binding. Printed on bond writing-paper. With 80 colored anatomical charts (detachable), showing outlines of body and skeleton in light red and the viscera in pale blue. Index for listing patients both by name and case number. St. Louis. Interstate Medical Journal Co. 1910. Price, postpaid, \$2.00.

The importance of carefully-taken and preserved case records is self-evident. It is only the nonprogressive practitioner who does not now have some system of recording and preserving notes of his cases.

The case book compiled by the *Interstate Medical Journal* includes 229 pages of outline for case histories, suitable for recording 114 cases. The outline in itself is fairly complete and will cover almost any case in practice. The data for urinalysis might be made to include indican and sulphates, tests for both of which are important. Likewise, there is no space allotted to blood pressure. Space given to prognosis and brief outline of information given to patient is of value since it is often of service to know what previous statement has been made.

In the back of the volume are charts for diagramatic outline of diseased areas. These are perforated and detachable so that they may be appended to history itself. There is an adequate index preceding the case records.

A book of this kind with detachable leaves would seem more practical, so that additional leaves may be inserted and fewer volumes be acquired.

DYSPEPSIA: ITS VARIETIES AND TREATMENT. By W. Soltan Fenwick, M. D. (London), Doctor of Medicine of the University of Strassburg. Philadelphia and London. W. B. Saunders Company, 1910. Cloth, \$3.00 net.

The work is based upon the experience gained by the examination and treatment of more than 18,000 cases of indigestion, with statistical inquiries confined to a thousand examples of the complaint.

The division into chapters is made upon the plan of the etiologic factors in dyspepsia, such as dyspepsia due to abnormalities of secretion, due to failure of muscular power of the stomach, due to inflammations, etc. The final chapter treats of intestinal indigestion.

There is a most admirable tendency throughout the book to set aside the erroneous disposition to regard the condition of indigestion as a substantive disease dependent upon a primary failure of the gastric function, and to impress upon the reader's mind that a disturbance of digestion in the stomach is rarely due to a primary disorder but is usually a consequence of serious disease of another and perhaps remotely situated organ. The extreme interdependence of function of the various organs of digestion and the importance of differential diagnosis in determining the one primarily at fault are clearly demonstrated.

The author calls attention to the fact that the art of gastric diagnosis is the art of taking trouble, that it is at all times diametrically opposed to guesswork; that an accurate diagnosis is the only possible basis for curative treatment.

The book furnishes abundant food for careful thought and will be of great assistance to the general practitioner as well as the specialist.

PRACTICAL SUGGESTIONS IN BORDERLAND SURGERY. By Gustavus M. Blech, M.D., Professor of Clinical Surgery, Medical Department of Loyola University, Chicago; Director-in-Chief Illinois Legion American Red Cross; etc. Cloth. Pp. 219. Professional Publishing Company. Philadelphia, 1910.

The purpose of this little volume seems to be to stem the tide of operative furor with which the author and publishers seem to think the medical world is suffering, and it is perhaps well enough to encounter an occasional plea for conservatism in those things that do not demand immediate operative interference. The question to be considered is as to the exact place where conservatism lies in certain borderland cases. In the light of modern gastric and intestinal surgery, no careful clinician, medical or surgical, could agree with the author that it is the part of wisdom to await the onset of progressive and continuous hemorrhage in gastric or duodenal ulcer before resorting to surgical relief, any more than one would be justified in temporizing with the X-Ray and serum for the reduction of an hypertrophied prostate until serious bladder or kidney infection had taken place. Nor have we any moral right to render our patients chronic invalids from recurrent attacks of appendicitis or pyosalpinx in order to satisfy ourselves that every non-surgical

measure in the therapeutic gamut has been given a trial.

It would be well for the author to acquaint himself more thoroughly with the work and teachings of the American masters in surgery before attempting a bibliographic discussion of the problems under consideration.

A commendable plea for a more prolonged surgical training before entrance into the actual operative field should meet with a hearty response from those who have at heart the interests of this specialty.

A few typographical errors are noted, as on pp. 122 and 201. The language is at times a little clumsy, but with all a great many practical and helpful suggestions are offered.

DUODENAL ULCER. By B. G. A. Moynihan, M.S. (London) F.R.C.S., Senior Assistant Surgeon at Leeds General Infirmary, England. Octavo of 379 pages, illustrated. Philadelphia and London, W. B. Saunders Company, 1910. Cloth, \$4.00 net; Half Morocco, \$5.50 net.

So interesting does the experience of Mr. Moynihan make this work that one is loathe to lay down the book ere he has read it through.

As is related in the preface, no other problem in abdominal surgery has begun to compare in development within the past ten years with that of duodenal ulcer. And as our knowledge of the subject daily broadens, the narrower becomes that category of cases which a decade ago went by the name of "functional disturbances" of the stomach or bowels. Modern surgery shows us that at the bottom of the vast majority of these old so-called "dyspepsias" there rests a definite pathology, either in the stomach, bowel, gall-bladder or appendix, and of all these, our knowledge of duodenal ulcer stands out perhaps the clearest. Hence it is not surprising to have the author declare that in his hands the mortality for his whole series of cases was only 1.6 per cent., and among the last 121 cases operated upon there was not a single death.

So firmly convinced is the author that the old cases of "hyperacidity" or "acid gastritis" are in truth cases of duodenal ulcer that he makes the statement that "recurrent severe 'hyperchlorhydria' is duodenal ulcer." And the interesting fact is brought out that as a rule when a test meal is given in such cases there is rarely found any excess of acidity.

Hematemesis and melena should not be considered as usual symptoms of duodenal ulcer but rather, according to Moynihan, as complications and evidence of neglected opportunities.

A curious contrast seems to exist in relation to the progress of chronic ulcer of the duodenum as compared to a like lesion in the stomach. That is to say, we are all now familiar with the frequency with which cancer of the stomach develops upon the site of an old ulcer; and yet, whereas chronic duodenal ulcer is a far commoner lesion than gastric ulcer, cases of primary cancer of the duodenum are extremely rare. As yet there remains no satisfactory explanation for this curious phenomenon.

The latter part of the volume is devoted to a detailed statement of all the cases operated upon for duodenal ulcer by the author up to the end of 1908, together with an analysis and summary.

So concise and yet exhaustive a treatise on a by-no-means uncommon lesion should find a ready place in the library of every medical man and particularly the surgeon, though the responsibility for the diagnosis involves either to an equal extent.

DISEASES OF THE EYE. By George E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania, etc. Sixth edition. 1910. Thoroughly revised. Philadelphia and London: W. B. Saunders Company. Cloth, \$5.00.

The sixth edition of this comprehensive work shows many changes due to revision and addition of new material in order to keep it, as it has been in the past, one of the leading text-books on diseases of the eye. The author has given very complete descriptions of the methods of examining the eyes and the symptoms, diagnosis and treatment of ocular diseases.

In the new matter incorporated in the book may be found the following subjects: The Use of the Astigmatic Lens, or Crossed Cylinder; Obstetric Injuries of the Cornea; Posterior Scleritis; Cyanosis of the Retina; Ataxial Amblyopia; Ocular Complications of Nasal Accessory Sinus Disease; Intermittent Exophthalmos; Kuhnt-Szymanowski Operation for Ectropion; Galvanopuncture for Ectropion and Entropion (Ziegler); Establishment of a Filtering Cicatrix (Herbert's operation); Combined Iridectomy and Sclerectomy (Lagrange's operation); Precorneal Iridotomy (Axenfeld); V-Shaped Iridotomy (Ziegler's operation); Smith's Operation for Removal of Cataract in the Capsule; Operations for Prothesis in Cicatricial Orbit.

Many of the chapters have been entirely re-written to make them conform to present-day knowledge and throughout the entire work due care has been observed to include all recent advances in the field of ophthalmology. The wide experience of the accomplished and well-known author is indicated by the thoroughness and apparent accuracy with which all subjects are treated, and this only adds to the value of a book which has long been held in high esteem by the medical profession.

The mechanical work of the publishers is up to the usual standard and is all that could be desired. The work is enhanced by a carefully prepared index.

A TREATISE ON DISEASES OF THE EYE. By John Elmer Weeks, M. D., Professor of Ophthalmology in the University and Bellevue Hospital Medical College; Surgeon to the New York Eye and Ear Infirmary; etc. In one octavo volume of 944 pages, with 528 illustrations and 25 full-page plates. Cloth, \$6.60, net. Lea & Febiger, Philadelphia and New York, 1910.

So many new or revised treatises on ophthalmology have appeared recently that it would seem that there is no legitimate reason for the publication of any

more books of similar character, and yet this new volume by Dr. Weeks is of such superior excellence in every particular that it at once commends itself to the discriminating reader, and will take its place as one of the most complete and comprehensive works in a single volume ever published. The subject matter has been prepared with exceptional care, and every page of the book bears testimony to the thoroughness and comprehensiveness with which the author has labored to produce a volume of thoroughly trustworthy knowledge.

All of the subjects usually considered in a book on diseases of the eye have been sufficiently elaborated, and the accepted methods of treatment are fully described. Due weight has been given to recent developments in ophthalmology, including the rôle of microorganisms, and a special chapter on the preparation of specimens for diagnosis in the search for microorganisms has been added.

Some of the particularly noteworthy chapters are those on asthenopia and hysteria, relation of diseases of the throat, the nose, and the accessory sinuses to the eye, and ocular conditions connected with general disease.

Illustrations, both in black and white and in color, have been used freely and these very materially aid in a proper understanding of the text. The work of the publishers is eminently satisfactory. The author may be assured that he has produced a book that is not only adapted to the wants of the student and general practitioner, but will prove of distinct value to the specialist as well.

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THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION

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ORIGINAL ARTICLES

SERUM DIAGNOSIS OF SYPHILIS*

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The discovery of a method of serum diagnosis of syphilis furnishes a very striking illustration of the fact that one discovery in science forms a little later the foundation on which a more important discovery rests. The phenomenon of bacteriolysis, first demonstrated by Pfeiffer in 1894, gave to the study of immunity an importance it had not before possessed. Ehrlich three years later announced his side-chain theory of immunity, one of the most stimulating conceptions ever advanced. In 1900 Bordet¹ found that "following the introduction of the red blood-cells of one species into the organism of another, a hemolysin is formed which so injures the blood-cells of the first species that their hemoglobin goes into solution." He also showed that this hemolysis depends on the action of two substances in the hemolytic serum. These two substances are called respectively the hemolytic amboceptor and the complement. This discovery of Bordet and a certain application of it discovered by Gengou² are the basis of the serum tests for syphilis.

In the process of hemolysis, we have three factors: the red blood-cells to be hemolyzed or destroyed, the amboceptor which is specific and thermostable, and the complement which is non-specific and thermolabile. The relation of these factors to each other in the process has been very aptly described by allowing a lock to represent the cell, a key to represent the amboceptor and the hand that turns the key, the complement. By

giving a lock to a smith, we can get a key made to fit the specific lock exactly, but the key can be turned and the lock opened by any hand. When we inject the red blood-corpuscles of one animal into another we get amboceptors which exactly fit corpuscles from the same species as those injected, but complement from any serum can produce the hemolysis. A member of this Society recently stated it in this way: A roof to be torn away represents the cell to be destroyed; the man who can tear away the roof represents the complement which destroys the cell; and the ladder by which the man reaches the roof represents the amboceptor by which the complement reaches the cell.

Gengou,² in 1902, discovered that the phenomena just described applied not only to red blood-cells but also to bacteria and to the higher protozoa. If serum from an animal immunized to typhoid bacilli, and therefore containing bacteriolytic amboceptor, be mixed with complement and a suspension of typhoid bacilli, and the mixture incubated for one-half an hour, little or no gross change can be detected. But it can be shown that the complement has been absorbed from this bacteriolytic system, by adding to it some red blood-cells and a corresponding hemolytic amboceptor. No hemolysis occurs because there is no complement available. It has all been absorbed or bound by the bacteriolytic system.

Wassermann and Bruck³ first applied this principle in the diagnosis of typhoid fever. Wassermann then conceived the idea that if he would use a syphilitic antigen this test could be applied to the diagnosis of syphilis. *Spirochaeta pallida* will not grow on any known culture media, and cannot be used as typhoid bacilli are. Hence, Wassermann used as his antigen an extract of the

*Read before the Indiana State Medical Association at Fort Wayne, September 28, 1910.

1. Ann de l'Inst. Pasteur, 1900, xiv, 257.

2. Ann. de l'Inst. Pasteur. 1902, xvi, 734.

3. Deutsche Med. Wochenschr., 1906, p. 450.

liver of a congenitally syphilitic fetus. This organ is, under such conditions, especially rich in spirochetes.

In performing the test the following substances were employed:

1. Antigen. An alcoholic or watery extract of the liver of a congenitally syphilitic infant.

2. Serum to be tested. It must always be inactivated by heating to 56° C. for thirty minutes.

3. Complement. Guinea-pig serum is used for this and it must be fresh.

4. Hemolytic amboceptor. This is made by injecting a rabbit with sheep red blood-corpuscles. At least five injections of 2 to 6 c.c. of sheep's blood must be made. Ten days after the last injection the animal is bled to death; the serum is allowed to separate and is inactivated by heating to 56° C. for thirty minutes. This serum must be standardized by determining just how much will be needed to completely hemolyze 1 c.c. of a 5 per cent. suspension of sheep corpuscles.

5. Suspension of washed sheep's corpuscles. Fresh sheep's blood is drawn into an equal quantity of an oxalate or a citrate solution to prevent clotting. This is then centrifuged and the corpuscles washed in physiologic salt solution. A 5 per cent. suspension of these is then made.

The test is applied as follows: Six small test tubes are arranged in pairs. In one tube of each pair the proper amount of antigen is placed. To all six tubes, the correct dose of complement is added. To each tube of the first pair a correct dose of serum from a non-syphilitic is added; to the second pair, serum from a known syphilitic, and to the third pair, serum from the patient. The tubes are then incubated for half an hour to allow time for the binding of the complement. To each tube is then added the proper amount of washed sheep corpuscles and hemolytic amboceptor. The tubes are again incubated for an hour. At the end of that time, both tubes of the first pair containing serum from a non-syphilitic should show complete hemolysis. The first tube of the second pair containing known syphilitic serum and syphilitic antigen should show no hemolysis, while the second tube of this pair which received no antigen should be completely hemolyzed. If there is no hemolysis in the tube containing patient's serum and antigen the reaction is pronounced positive; if there is complete hemolysis the reaction is negative.

Wassermann's announcement of the test was immediately followed by numerous investigations both into its specificity and into its mechanism. It was soon discovered that extracts of a normal

liver or of a normal heart, or even of a guinea-pig's heart were almost as good antigens as extracts of a congenitally syphilitic liver. Levaditi and Yamanouchi⁴ then announced that an alcoholic solution of lecithin was an equally suitable antigen. Fleischmann⁵ found that cholesterol, and Sachs and Altmann⁶ that sodium oleate would serve as an antigen almost as well as an extract of syphilitic liver.

Numerous modifications and simplifications of the Wassermann test have been proposed. Theoretically any hemolytic system can be used in the tests, and at least eleven such systems have been used. Maslakowitz and Liebermann⁷ used sheep corpuscles, hog serum which contains anti-sheep amboceptor, and guinea-pig complement. Bauer⁸ and Hecht⁹ and Flemming¹⁰ used sheep corpuscles and depended on the variable and unknown amount of anti-sheep amboceptor in the patient's serum. Bauer added guinea-pig complement, but both Hecht and Flemming utilized the complement normally present in human serum. The modification proposed by Noguchi¹¹ is the most satisfactory simplification of the test yet advanced and will be described in detail.

Noguchi's test differs from the original Wassermann in four important respects. First, a solution of crude lecithin is used as antigen instead of an extract of syphilitic liver. Second, human corpuscles are used instead of sheep corpuscles. Third, the hemolytic amboceptor is obtained by injecting a rabbit at intervals of five or six days with 10 to 20 c.c. of washed human red blood-cells. Fourth, neither the hemolytic serum nor the patient's serum is inactivated by heat before using.

The Noguchi test possesses some advantages over the original Wassermann method. The various reagents in proper doses are dried on bits of filter paper and will retain their potency for a long time. It is also a more delicate test. Indeed it sometimes appears to be too delicate, and has given positive results in the hands of some observers in as high as 7 per cent. of cases where there was no evidence that the patient was syphilitic. This over-sensitiveness of the test may be due in a measure to the fact that the patient's serum is not inactivated before using as in the original Wassermann method. Swift¹² found that by inactivating the patient's serum the per-

4. *Compt. Rend. de la Soc. de Biol.* 1907, lix, 740.

5. *Berl. kl. Wochenschr.*, 1908, xlv, 490.

6. *Ibid.*, p. 494.

7. *Centralbl. f. Bakt., Originale*, 1908, xlvii, 379.

8. *Dent. Med. Wochenschr.*, 1908, xxxiv, 698.

9. *Wiener klin. Wochenschr.*, 1909, xxix, 265.

10. *Brit. Med. Jour.*, 1909, ii, 984.

11. *Jour. of Exp. Med.*, 1909, xi, 392.

12. *Arch. Int. Med.*, 1909, iv, 494.

centage of error with the Noguchi method was almost completely eliminated. In Noguchi's own hands¹³ and in the hands of those most experienced in its use, this over-sensitiveness does not exist. Its specificity appears to bear a direct relation to the skill and experience of the investigator.

The Wassermann test, on the other hand, in 8 or 9 per cent. of cases fails to give a positive result in patients that are known to be syphilitic. This is due to the fact that quite often human serum contains anti-sheep amboceptor. Since the amount of syphilitic amboceptor in the patient's serum is an unknown quantity it is possible that in some cases there may not be enough to completely absorb all the complement and thus a small amount may be left free. This small amount may be sufficient to cause hemolysis in the presence of such a large amount of anti-sheep hemolytic amboceptor, namely that added purposely plus that normally present in the patient's serum. For Morgenroth and Sachs¹⁴ showed that in the presence of larger amounts of amboceptor smaller doses of complement suffice for hemolysis. This variability in the amount of amboceptor and the impossibility of accurately measuring its amount form the chief objections to Wassermann's original method and to Hecht's and other modifications of it.

Kaplan¹⁵ urges very strongly that all sera be tested by the Wassermann and Noguchi methods simultaneously. In his opinion, "a fairly marked Wassermann reaction, ninety-nine times out of a hundred, means syphilis, and a negative Noguchi the same number of times means no syphilis. The two methods are very decisive, but in opposite ways: and used together, carry with them an assurance which no amount of thoroughness and precision will replace if only one method is used."

In some respects the serum test for syphilis seems simple enough, but any one who has had any experience with hemolysis work knows the abundant chance of error that may entirely vitiate the results obtained. At the State Laboratory we have done something like 300 tests according to Noguchi's modification, but we are far from considering our results as possessing any degree of accuracy, and therefore we make no analysis of them. Kaplan did 1,390 tests but did not consider the first 390 sufficiently accurate to justify their use in drawing conclusions in regard to the value of the test. Those who have had

most experience in the use of the reaction are the most emphatic in declaring that abundant experience and thorough understanding of the phenomena of hemolysis are absolutely essential to reliable results.

In the first place all the reagents will, in time, lose their potency. This occurs slowly when they are in the dry form, more rapidly when kept in a liquid state. On account of this gradual loss of strength it is necessary to restandardize all reagents at intervals of a few days to two weeks. The dosage is exceedingly important. Too little antigen will render impossible the binding of all the complement present and thus result in a negative reaction where it should be positive. If the hemolytic amboceptor has deteriorated there may not be enough present to cause complete hemolysis and a given reaction may be pronounced when it should be negative. Too large a dose of hemolytic amboceptor may, as already stated, be activated by a subminimal dose of complement and hemolysis may thus occur in a test that should be positive. This illustrates the necessity of frequently restandardizing all reagents. In performing the test such minute quantities of the various substances are used that it requires no little practice to accurately measure out 0.1 c.c. instead of 0.12 c.c. A difference of 0.02 c.c.—about one-fourth of an ordinary drop—will not infrequently entirely change the result. The guinea-pig serum used as complement must be fresh. Serum that has stood for twenty-four hours even at refrigerator temperature is practically worthless. Even variations in the reaction of the ingredients used in the test may change the result. Sachs and Altmann¹⁶ examined ten sera with respect to the effect of increased or diminished acidity on the syphilitic reaction. They found that by adding 1/800 to 1/3200 normal sodium hydroxid solution to positive sera, the syphilitic reaction could be completely abolished. Sera thus inactivated could be reactivated by adding a proper amount of hydrochloric acid. Non-syphilitic sera, however, could not be made to react positively by changing the reaction.

The syphilitic antibody which is the cause of the reaction exists in the blood serum and in the lymph. It has been found in the milk of syphilitic mothers,¹⁷ in the urine,¹⁸ and in pericardial, pleural and peritoneal exudates.¹⁹ Constantini²⁰

16. Berl. kl. Wochenschr., 1908, S. 699. Abstract in Centralbl. f. Bakt., Referate, 1908, xlii, 301.

17. Bab. Zeitschr. f. Geb. u. Gyn., 1908, ix, H. 2. Abstract Centralbl. f. Bakt., Referate, 1908, xliii, 279.

18. Blumenthal and Wile, Berl. kl. Wochenschr., 1908, No. 22, Abstract in Centralbl. f. Bakt., Referate, 1908, xlii, 304.

19. Veszpremi, Centralbl. f. allg. Path., 1910, xxi, 203.

20. Policlinico Sez. Med., 1908, Nos. 5 & 6. Abstract in Centralbl. f. allg. Path., xx, 590.

13. Jour. Am. Med. Assn., 1910, iv, 727.

14. Ehrlich's Collected Studies on Immunity, 1st. Ed., New York, 1906, p. 252.

15. Am. Jour. Med. Sc., 1910, cxxxix, 82.

has shown that the antibody is present in the blood of syphilitics without lesions of the brain or cord, but not in the cerebro-spinal fluid. In parasyphilitics it is present in both blood and cerebro-spinal fluid in about equal amount. Thomsen, Oluf and Boaz²¹ found that the antibody might be absent at birth in congenitally syphilitic infants and that it increases in amount during the first month of life.

In the hands of an experienced worker, the Wassermann and Noguchi reactions are by far the most important laboratory tests for the recognition of syphilis. They yield from 20 per cent. to 50 per cent. more positive results than examinations for spirochetes. Any test for syphilis to be of any value must fulfil two conditions: first, it must give a negligible minimum of negative reactions in actual cases of the disease; and second, it must give a negligible minimum of positive results in diseases other than syphilis.

Hoehne,²² and Hecht, Lateiner and Wilenko²³ found the serum test for lues positive in cases of scarlet fever; Bruck and Gessner²⁴ in five cases of tuberculous leprosy; and Eichelberg²⁵ in different protozoan diseases, in scarlatina, idiopathic epilepsy, pneumonia, typhoid fever, advanced tuberculosis, diabetes and malignant tumors. But Marchildon²⁶ has shown that a positive reaction in these diseases is found only very rarely and that in such cases the nature of the disease is usually so evident that there would be no danger of mistaking it for syphilis even if a positive Wassermann test were obtained. It must also be remembered that the absolute exclusion of syphilis in a given case is often exceedingly difficult.

In determining the specificity of the serum test for syphilis, it is necessary to take into consideration the stage of the disease and the duration and nature of the treatment the patient has received. Results have varied greatly with different investigators and with different methods. In the same series of cases, Noguchi's test will yield from 1 to 10 per cent. more positive results than the original Wassermann method.

Using Wassermann's technic, Hoehne²² obtained positive results in only 38.6 per cent. of his cases of primary syphilis, while Detre and

Brezovsky²⁷ found 98 per cent. positive. The average²⁸ of the results of eleven different investigators gave approximately 70 per cent. of positive reactions in primary syphilis. In manifest secondary syphilis positive results vary from 73.3 per cent.²⁹ to 100 per cent.³⁰ with an average of approximately 90 per cent.²⁸ In manifest tertiary syphilis an average of about 78 per cent. of positive results was obtained, while approximately 50 per cent. of the cases of latent syphilis react positively.

The practical utility of the serum test for syphilis has been proved in differential diagnosis, in determining the real nature of certain pathologic conditions of obscure etiology, and in controlling treatment.

Leber,³¹ Cohen,³² Bulson,³³ and others have found the Wassermann reaction of especial value in diagnosing certain doubtful cases of eye disease, and Opitz³⁴ found it of service in obstetrics.

The Wassermann test promises much in the way of solving numerous perplexing questions concerning hereditary syphilis. Colles' law, that a woman who has borne a syphilitic child is immune to syphilis although she may present no signs of the disease and may nurse her child without danger to herself even though it has luetic ulcers in its mouth, has passed at its face value for many years. Examination of the serum of such mothers seems to prove that the majority of such women are really syphilitic. Knöpfelmacher and Lehndorff³⁵ report the results of serum reactions of 116 Colles mothers. Those mothers who denied infection or treatment for lues gave a much higher per cent. of positive reactions than those who claimed to have had syphilis and had been treated. They conclude that practically all Colles mothers have syphilis and that congenitally luetic children get their infection not at the time of fertilization but from the mother through the placenta sometime during gestation. Bab¹³ found that an extract of the placenta of a Colles mother would serve as antigen. He also obtained a large percentage of positive serum reactions from such women. Baisch³⁶ found spirochetes in the placentas of Colles

27. Wien klin. Wochenschr., 1908, xxi, 1700 and 1743.

28. Noguchi, Serum Diagnosis of Syphilis, Philadelphia, 1910, p. 102.

29. Wassermann, Neisser, Bruck and Schucht, Zeitschr. f. Hyg. u. Infektionskr., 1906, lv, 451.

30. Ledermann's Deut. Med. Wochenschr., 1908, xxxiv, 1760.

31. Vortrag auf der 34 Vers. d. deut. ophthalm. Gesellschaft, 1907, Abstract in Centralbl. f. Bakt., 1908, Abt. i, xli, 318.

32. Berl. kl. Wochenschr., 1908, No. 18.

33. Jour. Amer. Med. Assn., 1910, lv, 181.

34. Med. Klinik, 1908, iv, No. 30, Abstract Jour. Am. Med. Assn., 1908, li, 798.

35. Jahrb. f. Kinderheilkunde, 1910, xxi, 156.

36. Münch. Med. Wochenschr., 1909, lvi, 1929.

21. Berl. kl. Wochenschr., 1909, No. 12. Abstract in Centralbl. f. allg. Path., 1909, xx, 588.

22. Berl. kl. Wochenschr., 1909, xli, No. 19. Abstract in Centralbl. f. allg. Path., 1909, xx, 589.

23. Wiener. kl. Wochenschr., 1909, S. 523. Abstract in Centralbl. f. allg. Path., 1909, xx, 337.

24. Berl. kl. Wochenschr., 1909, Nr. 13. Abstract in Centralbl. f. allg. Path., 1909, xx, 591.

25. Deut. Zeitschr. f. Neuenheil., 1909, xxxvi, Nos. 3 and 4. Abstract in Centralbl. f. allg. Path., 1909, xx, 973.

26. Jour. Am. Med. Assn., 1908, li, 2149.

mothers whose sera gave positive Wassermann tests thus proving beyond any reasonable doubt that these women are truly syphilitic.

The difficulty of diagnosing clinically all forms of visceral syphilis, except possibly gumma of the brain, is too well known to require comment. In this field the serum reaction may be of very great value. It may be the deciding factor in differentiating gumma of the liver or one obstructing the bile duct from cancer. Butler³⁷ declares that in every disorder of the liver and in prolonged febrile disturbance in which the etiologic factor is uncertain, syphilis should be considered and a serum test made. The infrequency with which visceral syphilis is recognized clinically is shown by the fact that Lesser³⁸ saw 30 gummas at post mortem that had not been discovered during life. He also found unmistakable evidence of syphilis in 9 per cent. of all males over 25 that came to autopsy in Berlin. It has been estimated that 25 per cent. of all males in Berlin over 25 years old have syphilis. Butler calls attention to the significant fact that the number showing demonstrable lesions of lues at autopsy is nearly one-half the total estimated number of syphilitics. "About 50 per cent. of cases of latent syphilis give a positive Wassermann reaction, i. e., the frequency of positive reactions in latent syphilis about equals the frequency of syphilitic processes in internal organs that are not recognized during life. No stronger argument than this could be introduced to prove that a positive Wassermann reaction indicates an existing syphilitic process in the organism." Neisser³⁹ is quite emphatic in his opinion of the significance of a positive serum reaction. He declares that "When we find these so-called (syphilitic) antibodies, we have to do with a patient who has got syphilis, and I believe we may even say, with one who still harbors the syphilitic virus." A strong statement, that, from so great an authority as Neisser. It may be remembered, however, that not every ex-typhoid patient who gives a positive Widal reaction is a bacilli-carrier, and vice versa, not every bacilli-carrier gives a positive Widal reaction. Reasoning by analogy, the presence of a positive Wassermann test does not absolutely prove that the syphilitic virus is still active, but it must be considered strong evidence to that effect. For this reason, the serum reaction may come to be of very great assistance in solving, in individual cases, the troublesome problem of syphilis and marriage.

At present there is no reliable method of determining just when it is safe for a syphilitic to marry. More or less arbitrary rules have been laid down, such as requiring three years of thorough treatment and at least one year without symptoms after treatment has ceased. But Lesser's post-mortem findings prove that syphilitic lesions may exist in various viscera without giving rise to any definite symptoms. Hence the question of syphilis and marriage cannot be settled by arbitrary rules in a manner that will be satisfactory in every case. Since in the vast majority of cases a positive Wassermann test indicates the presence in some part of the body of syphilitic virus at least potentially active, it is not improbable that further investigations may prove that no syphilitic whose serum gives a positive reaction should be allowed to marry until he has been given further treatment. While such a rule might not protect the wife any better than an arbitrary one, it would, no doubt, more thoroughly protect the off-spring both from hereditary syphilis and from the so-called syphilitic heredity characterized by the various dystrophies which give the child such an unequal chance in the struggle for existence.

The Wassermann reaction has practically settled many questions of etiology which, previous to its discovery, were mere matters of conjecture. The examination of serum from post mortems has yielded some interesting results particularly in reference to cases with cardiac and vascular lesions. Schlimpert⁴⁰ obtained fifteen positive reactions in sixteen cases showing mesaortitis. Veszpremi⁴¹ obtained 100 per cent. positive reactions in serum from bodies showing "chronic fibrous aortitis," and 75 per cent. of positives in cases of chronic aortic endocarditis. The most striking results, however, have been obtained in cases of tabes and general paresis. McCampbell and Rowland⁴¹ have recently reviewed the literature and reported a number of results of their own. They came to the conclusion that "a positive Wassermann reaction with the blood serum occurs in 97.8 per cent. of those cases which, after varying periods of time, have been diagnosed as paresis. We have thus, a positive demonstration that paresis is a parasymphilitic or metasymphilitic disease."

While the facts thus far known would not justify the use of the serum reaction as an absolute control for the treatment of syphilis, it has, however, been found to be of some value in this respect. The iodids seems to have no effect on

37. N. Y. Med. Jour., 1909, lxxxix, 207.

38. Quoted by Butler, l. c.

39. Brit. Med. Jour., 1908, ii, 1087.

40. Verhandl. der deutsch. Path. Gesellschaft, 1909, p. 96.

41. Jour. Med. Research, 1910, xxii, 185.

the reaction. Mercurry, however, usually causes it to disappear completely.

In regard to the effect of treatment on the reaction, Citron⁴² has formulated two laws:

1. The longer the syphilitic virus has worked in the body, and the oftener it has caused recurrences, the more constant and the stronger is the antibody content of the serum.

2. The earlier the mercurry treatment is started, the more frequently it is repeated, the more advantageous the method of application, and the shorter the interval since the last course of treatment, the less is the antibody content and the more frequently is the reaction negative.

Epstein and Pribram⁴³ discovered the very interesting fact that small amounts of mercurry added to a hemolytic serum accelerate and accentuate hemolysis so that possible complement fixation may be missed. They injected a rabbit, the serum of which had been found to inhibit hemolysis of sheep corpuscles, with bichlorid of mercury and found that the mercurry salt appeared in the blood in sufficient concentration to prevent complement fixation. They conclude that the disappearance of the Wassermann reaction may not indicate a cure but that enough mercury is circulating in the patient's blood to inhibit the reaction.

After prolonged treatment, however, the reaction may disappear entirely as is shown by Ledermann's⁴⁴ statistics. He examined the serum of 550 syphilitics in the latent stage of the disease. Of those who had never taken treatment 81 per cent. gave positive reactions; of those who had taken one or two courses of treatment, 73.7 per cent. reacted positively; of those who had taken three or four courses of treatment, 47.7 per cent. were positive.

Boaz⁴⁵ made 1,345 tests and concluded that positive findings after systematic treatment are invariably precursors of a recurrence. He advises that the serum test be applied once a month in the first few years after infection and that treatment be resumed at once if a positive reaction is obtained. This procedure will, he believes, have a marked influence in warding off future trouble. The control of treatment in this way will probably come to be one of the most important fields of usefulness for the test.

After the administration of Ehrlich's famous "606," Neisser and Kuznitzky⁴⁶ obtained nega-

tive Wassermann tests in 44 per cent. of cases which had previously reacted positively. Other investigators have obtained a higher percentage of negative results after administration of this remedy.

In conclusion it has been shown above:

1. That there is in the blood serum of a syphilitic patient an antibody which, in the presence of extract of syphilitic liver or solution of lecithin, has the power of binding or absorbing complement and thus of preventing hemolysis when red blood-corpuscles and hemolytic amboceptor are added.

2. That this principle has been utilized in a test which is highly specific for syphilis, so that we are probably justified in saying that any patient whose serum gives a positive reaction still harbors the syphilitic virus.

3. That this test is of unquestionable value to the practitioner in differential diagnosis, in solving the difficult problem of when a syphilitic may safely marry, and if not in actually controlling, at least in directing the treatment of the patient.

DISCUSSION

DR. C. G. BEALL (Fort Wayne): Following the Wassermann announcement of this test for syphilis, there have been many attempts made to determine the presence of syphilitic virus by simpler methods. Principal among these was an attempt to get a precipitate in the serum of luetic individuals by means of a solution of liver salts. The consensus of opinion now is that the precipitin test is practically worthless.

Another recent test of a more simple nature is that of Nicholas, Fevere and B———, and is the introduction beneath the skin of a preparation which they call syphilene, which is a syphilitic liver extract. It is used in the same manner as the tuberculin test, and produces a local skin reaction. They have reported results in fifty cases, and in 42 per cent. they agreed with the Wassermann reaction.

Another test for the same purpose has been Wild's cobra-venom test. It is found the red blood-corpuscles of a syphilitic are more resistant to the hemolytic action of the cobra-venom than the corpuscles of normal individuals. However, this has the same objections that the Wassermann has or the Noguchi modification, because of the experience that is necessary to obtain anything like reliable results.

In regard to the presence of the reaction in other conditions, just recently they found that the reaction occurred quite frequently after ether narcosis. Of course this is easily ruled out, but it is a fact to bear in mind that after ether nar-

42. Berl. kl. Wochenschr., 1907, No. 43. Abstract Centralbl. f. allg. Path., 1908, xix, 235.

43. Zeitschr. f. exp. Path. u. Therap., 1909, vii, Abstract Am. Jour. Med. Sc., 1910, cxxix, 600.

44. Med. Klinik, 1909, v, No. 12, Abstract Jour. Am. Med. Assn., 1909, lii, 1467.

45. Berl. kl. Wochenschr., 1909, xlv, No. 13.

46. Berl. klin. Wochenschr., 1910, xlvii, 1485.

cosis the Wassermann reaction occurs—for five or ten days.

As Dr. Simonds said, the principal modification of the reaction that has been used in this country is the Noguchi. Foreign observers have done nothing with this, and we have nothing but our own reports to rely on. However, the statistics are accumulating, so that from American statistics the Noguchi modification is becoming well established.

I would like to say something of my small personal experience with this test, but while I have made about forty tests and they all agreed fairly well with the clinical diagnosis yet my results are not to be relied on, because of the extreme technical skill required in making the test, and the number of errors that are apt to appear. As Dr. Simonds said, Kaplan made 390 tests before he felt competent to draw any conclusions. Naturally this puts the test beyond the ordinary man's power, unless he does the test continually and all the time.

DR. C. F. NEU (Indianapolis): Mr. President, and Members of the Association: There does not seem to be much room for doubt that in the test we have a valuable aid to the diagnosis of syphilis, and it holds out prospects that it would be valuable in regulating the treatment of syphilitic conditions. It is unfortunate, however, that in a test that is apparently so valuable, there are so many difficulties in its application. When you take into consideration the details that have to be watched, and the minutiae so necessary to carry out the operation, you can readily understand that it opens up a large field. This makes it inapplicable to the ordinary practitioner. It can only be carried out by one who devotes his time and attention to laboratory methods, and even for one in laboratory work it is necessary that he continually carry out this test, because after an interval, in which they have not been carrying out the test, those who have tried it say they are apt to make mistakes.

Another feature in connection with the tests, we have to bear in mind that they are negative in from eight to ten per cent. of cases in which there is positive evidence of syphilis, and the positive reaction is given in other conditions besides syphilis. Cases have been reported where the Wassermann was positive in scarlet fever, in tuberculous leprosy, meningitis, and malignant growths. It is true that there might have been some syphilitic conditions present, but the mere fact that in from eight to ten per cent. of cases the Wassermann reaction was negative where there was a positive luetic condition, and the fact that you get a positive reaction in other conditions besides syphilis, makes it very important that those carrying out the test keep these points in consideration.

As I said, the process is beyond the reach of one in ordinary practice. It is difficult of appli-

cation, and the details that have to be considered put it beyond his reach and place it in the hands of the laboratory worker. Even in the laboratory there are very few who can devote the time and attention necessary to give the strictest consideration to these details. In talking to Dr. Simonds I was pleased to hear him say that he was not able to carry out these tests because in making them he had to use his own blood, and it was not very pleasant to have to withdraw a certain amount.

DR. W. R. DAVIDSON (Evansville): I would like to ask the essayists one question, and that is, for a man who is doing clinical diagnosis work from day to day in the laboratory, what is the recommendation for him? The consensus of opinion seems to be that the work should be limited only to expert laboratory workers, and yet almost in the same breath the recommendation is made that everybody who treats lues should make this test. What would you recommend for the possibility of that work being done in such a laboratory as I mention? If the work is good, certainly it should be carried out more extensively; but in the nature of things it would be impossible for me, for instance, to make this test every day. Would it be advisable for me to go on and work with it, on the principle of putting a rifle out of a window at night to shoot at a cat—it might hit and it might not?

DR. H. R. ALBURGER (Bloomington): I would like to say a word in connection with this subject. We know that this test is in the developing stage; it is not all worked out, as is evident from what the essayists have said, and it seems to me it would be the part of prudence for the laity and general practitioners to wait a little until this test becomes simpler. It is bound to come. Every laboratory test that is now simple was originally complicated. I think the wisest plan for the man who is doing ordinary clinical diagnosis, if he does want this test, is to put it in the hands of a man who is giving a good deal of time to that sort of work; trust to his experience and let him perfect his technic and give this test the benefit of his experience. I believe it is only a question of a short time until this test will be put on a practical basis, but the general practitioner must depend on the men in the laboratories to do that sort of work for him.

I thoroughly agree with the essayist that it is a valuable test so far, but I believe it is still in the stage when it should only be used in the hands of experienced men, because otherwise it will bring the test into bad repute by giving all sorts of conflicting reports from inexperienced workmen. A great many things in medicine have been given wrong interpretation by incompetent men.

I believe the reason we get positive results in cases that are negatively syphilitic, is because we are all of us somewhat immune to syphilis; we

have all inherited some immunity to syphilis. I think this may explain, possibly, the small percentage of results in negatively syphilitic people. But I believe in urging on the profession to leave this test, so far as possible, in the hands of men who are giving their attention and care to the development of the test.

DR. JOHN A. MACDONALD (Indianapolis): Just in line with Dr. Alburger's remarks I had it on my tongue to say something similar. He has perhaps unintentionally sounded a note of warning. We need it at this time in this test. By the very nature of the work it must be in the hands of men who are doing it and are prepared to do it. Then arises the condition that we have few men in any given community or state who are prepared to do this work and do it correctly. If we overload these men with specimens of blood for the decision of the Wassermann reaction, we soon produce a condition of affairs in which we will not get satisfactory results, or we get delayed results on account of the amount of work which the men have to do. This, however, does not impair the value of the reaction; it only limits our use of it and produces an economy in its use.

The cases in which it is most valuable are those sociologic cases in which we must know. If we limit its use to decisions of the possibility of marriage in certain forms of syphilis; to those cases in which doubt arises, and to conditions of the central nervous system, then we have done quite enough in the Wassermann reaction at the present time.

There are two diseases which are very similar in our hands—syphilis and malaria. Admit an error of eight per cent. in the Wassermann reaction, and what do we do? We go right back to the therapeutic test. Consequently we give a man quinin and iron and the usual treatment for malaria, and with the patient with suspected syphilis we go ahead and give him mercury, and he gets well if he has syphilis.

If we limit the number of cases for the Wassermann reaction to those which are absolutely necessary for decision, then we will spare the men who are capable of doing this work for us, and still have this method of information available.

DR. THEODORE POTTER (Indianapolis): Dr. Davidson's question remains unanswered. He asks what we are to do about those all over the state. The most important feature of this question, I think, is to get the mass of the profession to understand what a test of this sort is, what a laboratory method is, and what it amounts to to use it rationally and cooperate with the laboratory men in doing the best they can. I believe in every community there is someone who does more of this work with the Wassermann test, and the doctors in the surrounding country should call on the one who has the experience and join

with him in trying to get results in that special direction.

The trouble with all of us in matters of this sort is this: We have heard so much about laboratory tests, and have gotten the idea that they are perfect—that they are infallible, and we misjudge the reports of the laboratory men and do harm to the whole cause. It was so with the tubercle bacteria. It is so still in many instances where a doctor gets negative results, and he thinks that means the patient is not tubercular, and the average patient of to-day, who has so much knowledge about bacteria in the sputum, is examined and found to be negative, and goes out rejoicing that he has not tuberculosis. We are to blame for that sort of misinterpretation. Now what we should do is to join with the laboratory men in working the matter out, and at the same time not make the mistake of thinking that the reports are all infallible, that the test is in every case an absolutely final one.

I like the suggestion made by Dr. MacDonald, that so far as possible we reserve the application for the test to cases where it is really needed, and not call on the laboratory men to make the Wassermann test in a perfectly plain case of syphilis.

DR. L. F. SCHMAUSS (Alexandria): The point I want to make is this: How are we to know who makes a business of making this test for other doctors? I believe there are many doctors here in the same boat, and I think it would be a good idea to put on the blackboard the names of those who make a specialty of this work, and what the charges are for making the examination.

DR. W. T. MEFFORD (Chicago): Just a word in regard to technic. All laboratory men and men who have written on this subject make it seem extremely difficult. They frighten people from attempting to learn it. I want to assure you it is a very simple matter. There is not a man or woman in this audience that I cannot teach to do this test in two days. These materials are standardized and prepared all ready for use, and anyone can take the serum and do this work after one or two days' experience. The best laboratory worker we ever had was a young lady eighteen years old, and it was not two weeks until she was doing the work as perfectly as I could. I taught another young lady to do laboratory work for Dr. Butler. She took lessons one afternoon, and Dr. Butler—who is an expert in the Wassermann test—told me she was as good a worker as he ever saw do the test. In my judgment we all ought to learn to do this test. With a little experience you will reach results as well as anyone.

As to what it takes to make this test, you need an incubator (\$35), a centrifuge (\$30), and a few test tubes. Langstein introduced the drop method of doing this work. I use the drop method, and find it absolutely correct, and much easier to do.

As to the absolute necessity of having all the materials exact, it is only necessary to have your luetic liver exact, your serum, your complement and your amboceptor. As to the salt solution, you can put ten drops in a test tube and it works just as well as another amount. You all know that some corpuscles give off more serum than others, so you will not have the exact number of corpuscles anyway.

I can assure you that any physician can learn this easily, and can have nurses in the hospitals learn to do this work. You can have it done in your clinic cases, and you will find it a great help in your work.

DR. SIMONDS (closing): My experience has convinced me that the serum test for syphilis is by no means a simple one, that it is exceedingly delicate and useful, but that if improperly done may lead to great confusion in diagnosis. The mere mechanical manipulation of reagents and apparatus necessary to making the test is comparatively simple. But in all work in hemolysis the opportunity for error is very great and often comes from sources entirely unexpected. Hence, I do not believe the work of a man who knows only the mechanical side of the test without a thorough knowledge of the underlying principles can be relied on.

Unless one has accurate amounts of amboceptor he is likely to get either a positive reaction where he should not have one, or a negative where he should not have one. The only way one can determine what amount is accurate is to restandardize very often. This applies to the antigen which must be restandardized occasionally. In order to restandardize reagents one must understand the principles of hemolysis. Mere mechanical skill is not sufficient.

It is often stated that reagents dried on filter paper will keep almost indefinitely. At the State Laboratory we had one test tube of the fluid serum and quite a lot of the dried filter paper slips. For some reason, to our great surprise, the serum that was dried on the filter paper deteriorated first. That is entirely contrary to the teachings of the text-books. Our fluid serum had lost very little of its original potency, but had to be restandardized. This experience is an illustration of the unexpected things that may happen.

As a further illustration of the ease with which a mistake may occur, it has been found that a very slight variation in the acidity of the reagents may entirely change the results of the test. Sachs and Altmann tested serum with reference to the influence of alkalinity on the reaction, and found that if 1/800 to 1/3200 normal sodium hydroxid solution was added, the syphilitic reaction with known positive sera could be abolished. But if to this alkaline serum enough hydrochloric acid was added to bring it back to the proper reaction, a positive result would be

obtained. Not infrequently an exceedingly slight variation in the alkalinity or acidity of a serum, such as might be produced by unclean test tubes, may entirely vitiate the result. I must say, however, that Sachs and Altmann found that varying the reaction in non-syphilitic sera would never make them react positively.

I cannot agree that the test is such a simple one. I believe that the test done by the average busy practitioner would give results more confusing than enlightening, and that it should, therefore, be done only by regular laboratory workers who are well equipped with all necessary apparatus and who thoroughly understand the principles of hemolysis.

TUBO-OVARIAN HEMATOCELE SIMULATING ECTOPIC GESTATION

SURGICAL CONSERVATISM IN DISPUTE

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The purpose of this paper involves a question, still unsettled in the minds of a good many practitioners, and is intended as an appeal to them for a more rational therapy in the particular branch of surgery concerned.

To this end I beg your indulgence in the recital of a case report, in its full detail, which I believe important, in order to present, most effectively, the common sources of error in the management of like cases, and their misapplied therapy.

Mrs. A. F., age 31 years; married. History of past illnesses negative, usual diseases of childhood being mild in character, of uneventful course followed by quick recovery.

Menstrual History.—First menstruation at 15 years of age, not painful, five to six days in duration, profuse in character, at irregular periods every three to four weeks. Subsequent menstrual period unaccompanied by pain, until marriage nine years ago, which precedes the flow. Three years after marriage a leucorrheal discharge appeared, accompanied by backache, bearing down pain and other symptoms referred to as "catarrh of the womb" by the patient. This condition has since persisted, with increasing periodical pain, and continuous thin leucorrheal discharge. No vesical symptoms; no history of pregnancy.

Present Complaint.—A metrorrhagia of two months' standing, interrupted on April 26, 1906, severe pain in the right pelvic region then developing and lasting two hours, relief coming with

the escape of a profuse bloody flow, which ceased the same day. After an interval of comparative comfort another attack, and on April 29 the third attack, much more severe, seized the patient, causing her to seek professional advice. On this date she came under observation of the writer for the first time.

Close inquiry into the history failed to disclose any of the usual symptoms of pregnancy, or of the passage of possible products of conception, or of shreds, which might have escaped from a decidua. Examination revealed absence of breast signs, slightly enlarged uterus, with a right cystic tube, presumably a hydrosalpinx. Temperature 99.2 F.; pulse 100. No distinct pressure pain over the abdomen, but general tenderness evident; no vomiting nor intestinal disturbance. A coelotomy was strongly advised but decisively refused. On June 11, 1906, a curettement was done, though under protest, the metrorrhagic persisting uninterruptedly. After a protracted blood flow of two weeks' duration, a regular menstrual habit, free from pain, was established, continuing so for six weeks, the tubal hydrops diminishing appreciably in size and sensitiveness to touch. Body weight increasing and general health improving markedly, patient passed from observation until December, 1908. A left salpingo-oöphoritis had developed, extremely tender to touch and bound fast by adhesions; uterine mobility restricted, manipulation referring pain to diseased left tube. The right adnexa, previously the seat of the presumed hydrosalpinx, felt cord-like and hard, not painful to pressure. Symptoms subsided under the usual care and treatment. Two months later, March 8, 1909, severe abdominal pain, colicky in character, came on, concentrating itself in left adnexal region, and followed by extreme exhaustion and faintness. A bloody vaginal flow appeared, the first in 7 weeks, having missed the last period, though menstruation had until then been regular. No vomiting, but constant nausea. Temp. 101.2 F.; Pulse 110. Features pinched; enlargement of breasts, areola distinctly augmented; no colostrum; diffuse tenderness over abdomen. By vaginal examination a tender, slightly enlarged uterus was felt, barely movable and strongly anteverted, and a sensitive mass, difficult to outline, was situated to the left and behind the fundus uteri, and intimately connected with the same. Pulse and temperature dropping to normal the following day, patient was removed to the Methodist Hospital for operation. Consultation elicited the opinion that the condition was a

pyosalpinx, though in my judgment a complicated ectopic gestation could not be excluded. Under observation the further course proved uneventful, and on March 15 a coelotomy was done. On the right side a hematosalpinx, size of the little finger, containing chocolate-colored, old, inspissated blood, and a cystic ovary were found, bound fast by dense adhesions to adjacent structures. Appendix vermiformis not affected. Left adnexa presented a tubo-ovarian hematocele, the size of an orange, displacing the uterus forward, and to the right, and occupying the space posterior to the organ down to the cul-de-sac. Almost under bursting tension, the thin, delicate sac-wall ruptured from the gentle impact of the assistant's sponge, permitting the escape of its contents which consisted of red fluid blood and clots apparently of recent formation. Adhesions to intestines and pelvic wall easily separated, the tumor was readily removed, and on the opposite side a salpingectomy and a resection of the ovary was done. Uneventful recovery, patient leaving the hospital March 25, on the tenth day after operation.

Pathology.—The specimen presents a blood-cyst, with no evidence of torsion or twisting of the Fallopian tube; the abdominal extremity is curled around the ovary and intimately fused with it by adventitious union, the intervening wall being apparently absorbed. The ovary is represented by a thin hematogenous sac the size of a lemon; the tubo-ovarian mass being approximately the size of an orange. The tubal walls are blood pigmented, thickened at the uterine extremity and extremely thinned at the fimbriated end. Its contents of clotted blood occupies two distinct compartments, pockets or follicles. The ovarian tumor comprises a single blood-cyst, its stroma having been entirely destroyed. The specimen of the other side has thickened walls, containing old dried blood resembling coffee grounds. The lumen presents the same arrangement of follicles as does the tube of the opposite side.

According to the pathologic report from Dr. Alburger, "the tube is severely inflamed and shows some necrotic changes, nothing indicative of extra-uterine pregnancy. The tissue from the ovary seems to be a portion of a dermoid cyst-wall, as we can note a very unusual irregularity of the epithelium, large and overdeveloped hair follicles, and in one place a small island of developing cartilage."

Unfortunately, information on adnexal disease and neoplasms is yet too uncertain for dogmatic opinion, and hence the lamentable lack of exactitude in differential diagnosis, which is common

knowledge among us, and which is emphatically demonstrated in the case of the present writing.

The brief period of time that tubal gestation has undergone systematic and scientific investigation has already borne bountiful rewards, resulting in improved diagnostic ability, timely and preventive surgery, saving many lives from permanent invalidism, if not from sudden death. This advancement we owe to the careful and systematic scrutiny of the early clinical manifestations, inducing prompt intra-abdominal exploration, and affording opportunities for early observation and study of the initial condition, thus extending our conception of its pathology and its rational therapy. Yet, with this advance and improvement in clinical methods, the progress in the study of its histo-pathology has not kept pace, so that there is still much to be learned from this. Bearing on this state of affairs, and our indefinite information of adnexal pathology in general, are statements from Kelly that "the majority of hematoceles are tubal pregnancy in origin, other causes rarely obtaining," and that "the etiology and pathology of hematoma of the ovary is not well understood, that it is probably the result of hemorrhage in a Graafian Follicle, or cyst"; from Clark, that "hematosalpinx can be diagnosed with certainty only when the most common cause, occlusion of the lower segments, is demonstrable." Wilmer Krusen, in an article published in 1902, remarks: "True hematosalpinx rarely occurs. It may occur when hemorrhage takes place into the tube previously closed by inflammation. Such an accident may result from trauma, or by torsion of the pedicle, of a tubal cyst, or when there is an obstruction to the egress of the menstrual flow. The writer has never seen a case of tubal hemorrhage, in which ectopic gestation could be excluded. Although positive evidence of impregnation may not be present, yet undoubtedly the vast majority of these cases are of such origin." Such expression of authoritative opinion has not been without its dangerous effect upon those optimistically inclined, and as a consequence encouraged them to proclaim that all tubal blood-cysts are gestation sacs, a firm belief in the authenticity of this fallacious assertion being, in fact, current among the credulous.

Much progress has indeed been made in the study of extra-uterine pregnancy, and a great deal has been accomplished since the publication of Krusen's article in 1902, though there are still far too many ectopic gestations that go unrecognized, and end in sudden collapse from a fatal hemorrhage, or more rarely, after a less formidable but inevitable interruption, to be wondrously tidied over by Nature herself to ultimate recov-

ery, eluding detection altogether, to be discovered by accident in the course of some later development, or completely disguised in the form of a complicating pelvic abscess.

Ectopic gestation is not so rare that we need not be on the constant watch for it, early diagnosis and prompt surgical relief being the sheet anchor. Typical signs and symptoms early in gestation are not invariable, and to wait for the development of the classical text-book symptoms is to invite possible disaster. Certain protean clinical manifestations, formerly not identified with ectopic conception, have been acknowledged as very important desiderata in its early diagnosis, before it is made self-evident by the announcement of one of its accidental complications, too often, alas, a warning of the approaching end, rather than a premonition of beginning danger. The usual physiologic amenorrhea may be replaced by a metrorrhagia, frequently of dark color and accompanied by much mucus; especially when occurring in one who has been sterile, and who gives a history of a previous tubal inflammation, and following an unwonted delay in menstruation, no time should be wasted in confirming a suspected ectopic or ridding the case of suspicion. Of all the unrecognized ectopic cases, probably the majority are those presumably diagnosed as miscarriages. This error can be safely guarded against by adhering strictly to the rule never to pronounce with certainty a diagnosis of miscarriage based on the observation of the patient, or other technically unreliable information, but only on the direct evidence of an embryo or a fetus. A hasty curettage for a supposed hemorrhage *post abortem*, or for a metrorrhagia of a supposed simple endometritis is known to have resulted disastrously by precipitating the rupture of an ectopic gestation sac.

The exact diagnosis of a chronic sacosalpinx is yet, unfortunately, largely a matter of inference. We have in the case-report one spurious hematosalpinx, the origin of which remains in doubt. That the history and clinical evidences are strongly suggestive of ectopic gestation cannot be denied. The points in favor of such a diagnosis in the early history are those of: (1) Sterility, (2) Long continued metrorrhagia, associated with peculiar colicky pains, inducing faintness and exhaustion, (3) Absence of rise in temperature, (4) Presence of enlarged uterus and tubal cyst, possibly the result of a succession of a number of small intramural hemorrhages from the tubal conception which the nature of the specimen at operation would indicate, (5) Prolonged uterine hemorrhage following the curettage. The finding of the blood cyst, at operation, giving no

evidence of having been subjected to torsion or kinking by adhesions or to severe trauma, and filled with fresh clots, not with an admixture of serosanguineous fluid, as we expect to find in the rarer hematosalpinx, seemed to confirm conclusively the suspicion of an ectopic indicated by the late history, especially: (1) Enlargement of breasts and appearance of areola, (2) Delayed menstruation, (3) Sudden colicky pain, followed by prolonged bloody flow, even though unaccompanied by the passage of decidua. According to Clark "the absence of the passage of decidua is not against extra-uterine pregnancy." the discharge in his cases being obtained in 36 out of 83 cases, and in 7 while in the ward beds, or in only about 57 per cent. of the cases. He adds: "It may, by a process of involution, be converted into normal endometrium, or might escape unnoticed." The microscopic findings, showing nothing indicative of tubal conception, should not alone be considered positive proof against the existence of pregnancy, for Clarence Webster remarks: "In a certain number of cases, where clinical evidence points strongly to ectopic gestation, the most thorough examination of the tubal contents may fail to reveal corroborative evidence." Does it seem plausible to assume the possibility of a complete absorption of all fetal and maternal parts of conception, after an early interruption in gestation, and which, giving rise to no alarming symptoms, passes unrecognized, and leaves as its only trace a blood-filled sac?

Aside from the purely scientific interest and instruction to be derived from this case, it emphasizes a surgical principle, never to employ the less radical measure in our effort at conservatism, in the presence of doubtful pathology, and when the limitations of the conservative effort cannot be ascertained. It is not justifiable to assume the risk of conserving what may subsequently endanger the patient's life.

Early diagnosis of all tubo-ovarian masses by exploratory operation, if other means fail, followed by proper surgical relief, serves the best interests of the patient. Accordingly, a definite diagnosis of the case reported might have been ascertained early, in which instance the patient could have been spared the unfortunate complications which added such peril to her life and which rendered her incapable of conception and barren forever.

It seems to the writer far better and safer to operate when only a diagnosis of a tubal mass has been made than to have the patient suffer

the consequence of an accidental hemorrhage and the serious risk of a sudden fatality, or if life is preserved the great misfortune of chronic invalidism.

FRACTURE OF THE PATELLA

WITH A REPORT OF A VERY UNUSUAL CASE *

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Fractures of the patella constitute 1.4 per cent. of all fractures and this bone is refractured more frequently than any other.

Eighty-eight per cent. occur in males and it is found most frequently between the ages of 30 and 50.

It is caused by direct violence, as a gunshot wound or a fall or blow on the knee; or by indirect violence—muscular strain.

The relative frequency of these causes is a matter on which there is the widest difference of opinion.

The fracture is usually transverse, the line of separation being below the middle, so the upper fragment is the larger. It may also be longitudinal or comminuted or compound.

Separation of the fragments is usually greater in fractures due to indirect violence.

The treatment of fractures of the patella has for its desideratum the restoration of the bony fragments to such close apposition that bony union will take place; restoration of the fibro-periosteal capsule of the patella and of the accessory extensor aponeurosis, with no loss of motion or impairment of other functions of the joint.

The treatment is operative and non-operative.

Non-operative treatment is limited to those cases in which operative treatment is contra-indicated.

They are, with rare exceptions, all persons over 50 years of age, diabetics, tuberculous patients and those suffering from any serious organic disease.

Longitudinal fractures without displacement, incomplete fractures and those in which separation of the fragments is so slight as to be difficult of detection, are suitable for non-operative treatment.

Laboring people, those with the other knee ankylosed, or with but one leg, should be operated unless there is other pronounced contra-indication.

* Read before the Indiana State Medical Association, at Fort Wayne, Sept. 29, 1910.

As the vast majority of all patellar fractures occur between the ages of 30 and 50 and in people leading active lives, and, with few exceptions, in good health, it follows that but a small per cent. are unsuitable for operation.

The secreting synovial membrane of the knee joint is less able to resist infection than the peritoneal coat of the abdomen. And the more easily acquired infection of the knee joint is also more disastrous than a peritoneal infection. Consequently no operation for fracture of the patella should be undertaken by any one who is not a master of the practice of aseptic surgery.

We will not consider the management of non-operative cases, nor operation by subcutaneous suture but will confine ourselves to the open method of operation.

Many points in the open method are yet unsettled.

The time of operation is a subject of debate. The tendency at the present time is to wait five to seven days after the injury before operating. This is to permit the joint to acquire a certain degree of immunity that follows a hemorrhage into the joint, and to permit swelling and immediate reaction to subside in a measure.

In an ordinary case, if seen early, I can see no good reason for delaying operation beyond a few hours. Indeed, delay is an acknowledgment of lack of confidence in our surgical technic. And delay protracts convalescence the number of days delayed.

The incision may be longitudinal, transverse, semilunar with convexity upward, downward, inward or outward.

The semilunar incision with convexity downward affords the best view of the field. Nerve and blood supply are best and it has the additional advantage of placing the cutaneous scar in the least objectionable location.

With the field of operation well exposed, it is possible and certainly best to cleanse the joint and broken surfaces with dry gauze rather than to irrigate.

Many surgeons wire the fragments together but there is a growing tendency to trust entirely to absorbable sutures properly placed in the torn edges of the fibro-periosteal capsule, for retaining the fragments in apposition sufficiently to insure bony union.

I confess that I have more confidence in the success of the operation if the bony fragments are properly wired together, and there is little objection to the persistence of a wire suture properly placed in the anterior shell of the patella.

Two wires should be passed through drilled holes in the anterior shell of the bone. It is not necessary that they penetrate deeply and they must not invade the joint. The torn shreds of fibro-periosteum should be carefully removed from the opposed surfaces to permit accurate coaptation of the fragments.

The repair of the capsule and accessory extensor aponeurosis should be done with an absorbable suture. It is of the utmost importance that this suturing be properly done.

The institution of passive motion at as early a date as possible, massage and careful use of the knee are of the greatest importance in the after-care.

The following is a report of a case that, so far as I have been able to ascertain, stands alone in the history of patellar fractures.

Mrs. M., 37 years of age. Mother of two children.

Personal history: unusually void of illness.

Mother died of tubercular peritonitis.

Jan. 25, 1909, in descending a doorstep, her right ankle turned. She made a violent effort to avoid falling, felt a sudden pain in the right knee and fell to the ground. Within a few minutes I saw the patient and found a transverse fracture of the right patella.

Four hours after the injury, the open operation was done. A semilunar incision was made with convexity downward. The fracture was slightly below the middle line and horizontal, with one inch separation of the fragments. The blood clots were sponged out; torn, fringed edges of the fibro-periosteum lifted from the broken surfaces and the fragments drawn together with silver wire passed through drilled holes.

Chromatized catgut was used in repairing the capsule and aponeurosis, and subcutaneous catgut in closing the wound.

A plaster cast was put on from ankle to hip.

Knee was flexed after five weeks and patient wore crutches which were discarded April 15.

Flexion was practically perfect and patient was soon able to walk with but little difficulty.

July 6, 1909, while at a summer camp, I saw the patient slip on a wet board and sit down.

On examination I found that she had not only sustained a refracture of the right patella but also had fractured the left one.

Nine hours after the accident, both bones were operated on by the open method.

The right patella was broken at the junction of the middle and lower thirds, slightly below the former fracture, and somewhat obliquely, so that

the outer line of fracture was lower than the inner.

The internal silver wire was broken but the external was intact. It was impossible to trace the line of the old fracture. Fragments were separated one inch.

The left bone was broken slightly below the junction of the middle and lower thirds, and slightly obliquely, the external line of fracture being slightly lower than the internal. A fragment the size of a cherry stone was practically detached and was removed for examination which was subsequently made with negative result.

Under ether anesthesia, the semilunar incision with convexity downward was made in both knees.

The synovial membranes were freely exposed, all blood clots sponged out and the faces of the fractures carefully freed of the overlapping fringe of fibro-periosteum.

Aluminum-bronze was used for wiring the fragments together and chromic catgut for uniting the capsule and aponeurosis and for closing the wound.

Light splints of yucca were used from ankle to hip.

At the time of the first injury and subsequently, we had observed that the lower extremities were kept warm with difficulty. This we attributed to a poor circulation, which could not be favorable to perfect repair of the fractured bones. To relieve this condition, the Bier hyperemic treatment was commenced August 5, and continued daily until January 1. The elastic bandage was placed around the thigh as high up as possible, and allowed to remain on eight or nine hours each day. The blood supply to the lower extremities improved at once and there was no more difficulty in keeping these members warm. This condition has persisted to the present time. How much benefit, if any, in the way of assisting in the repair of the injury, was derived from this Bier treatment, is a matter of conjecture.

At the time of the second accident, the patient weighed 170 pounds. Fearing that a repetition of the fractures would be greatly favored if this weight were maintained, she was placed on a diet and her weight reduced to 120 pounds by December 1, and this weight she is able to maintain without inconvenience at the present time.

Passive motion was commenced in five weeks. Later she was instructed to swing the legs while sitting on the edge of the bed.

Walking was not undertaken until November 1, five months after the injury.

No crutches were worn after the second operation.

At the present time, fifteen months after the injury, the patient walks everywhere, with a diminishing and scarcely perceptible halt, and no fatigue.

Flexion of the knees is to 45 degrees.

DISCUSSION

DR. H. R. ALLEN (Indianapolis): We all owe a debt of gratitude to Dr. Barcus for presenting this subject, one of which most of us know so little. How many of you can open a book of human or comparative anatomy and read a page on sesamoid bones? It is not written. It ought to be written. These are mighty important little bones. They have many peculiarities in both human and comparative anatomy. Many animals get along nicely without any patella. Certain animals, like the dromedary or camel, have one 6 or 8 inches long.

And now to get right down to the subject as the doctor has given it to us. The tendon attached to the leg relative to the patella represents the radius, that is, the radius of the limitation of motion. When some people bend their knees, the patella will move externally; none moves internally; all move toward the shorter condyle. In repairing these cases it is important to run your purse-string suture close to the patella; get as close to the bone as you can. If you do not you will have limitation of motion.

Choice of suture: Never use silk or linen lubricated with vaselin. It will not hold. Use wire. My preference in wire is medium soft steel wire. Polish it bright and sterilize it, and you will have no trouble because of the wire.

Position of the body: Never let your patient lie in 180 degrees, but flex him at his hips. You relax the tension of the extensor muscles. I do not use plaster-of-Paris; I prefer wire splints, because they are easily removed and the whole thing is open for inspection.

The blood supply of the patella: No one studies sesamoid bones, so I will not ask you to tell me what the blood supply is. It will keep you guessing.

In regard to manipulation of the patella after union is supposed to have taken place. You have your three-week period during your first union. Operate these cases immediately; do not wait. Get right after them. Occasionally you may have to remove a small piece of bone in order to get apposition of the bony part. In order to avoid adhesion, begin your motion at the end of the first week. Use wire in preference to silk, because you want to move the patella in all directions. Begin your flexion later on. Be sure by the time your fibroid structure is established that you have

established your motion, and at the best you can do all of your cases will not come out perfect. There is something still to be considered in the fracture of the patella, which sometime some man like Dr. Bareus will suggest to us.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA

G. W. H. KEMPER, M.D.,

MUNCIE, IND.

(Continued from page 450.)

SOME OF THE EARLY PRACTITIONERS OF GIBSON COUNTY

Dr. William W. Blair of Princeton, a personal friend of many years standing, has kindly furnished me the following notes. Dr. Blair began practice in Princeton in the year 1850 and has continued up to the present date, and has personally known nearly all of the practitioners of Gibson county:

Fifty or sixty years ago it would have been much easier to gather information in regard to the early history of Gibson county, than at the present day, for at that time there were quite a number of the first settlers of this county who could have given the names of all who had been practitioners in this vicinity from about the year 1805.

Among the pioneers there were two women who were perhaps as well known in the obstetric line as any two persons in the county. Mrs. John Severn, who with her husband settled on Patoka River, three miles northeast of Princeton when this country was inhabited mostly by Indians and wild animals, was the first practicing midwife. I have often talked with her daughter, Mrs. William Leathers—who was born, lived and died on the same spot of ground—about her mother's early experience.

There were neither bridges nor ferries on Patoka River and when "Old Granny Severn," as she was familiarly named, had a call to the other side of the river—should it be too deep to "ford"—she would mount her horse and "swim" the river, no matter what the temperature or condition of the stream. She continued her work up to the time of her death, which occurred perhaps between the years 1835 and 1840.

The other midwife was Mrs. Rev. John Kell, who settled here in 1816. Just how soon she began her work in that line I am unable to say, but it was at a very early day, and she continued for a number of years after I came to Princeton:

indeed, till the feebleness of age laid her aside. She died in 1857 or 1858.

For a few years after white people began to settle in this locality, there is no record now accessible of any physician having located here. Vineennes, 27 miles north, being the nearest point where medical assistance could be obtained.

Drs. Casey, Charles Fullerton and Robert Stockwell were among the earliest practitioners to locate in this county. A few years later, Drs. Maddox and Kell were added to the number, but there is no available history as to the exact time of their location.

Dr. William Curl, a graduate of the University of Virginia, was the first medical graduate to practice in Gibson county, having settled in Princeton in 1832. He died in March, 1842, from pneumonia, at the age of 39 years.

Dr. I. I. Pennington (1805-1897) was practicing here in 1850, but how long before that time I am unable to say. Remained until about 1865.

Dr. George B. Graff, educated in Baltimore, settled here in 1843 and removed to Omaha, Neb., about 1862. He died about 1895.

Dr. James C. Patten graduated at Evansville and began practice in this county in 1849. He died in 1903. He served as assistant surgeon Fifty-Eighth Indiana Regiment during Sherman's march to the sea.

The names of a number of other deceased physicians of Gibson county have already been reported in the list heretofore published in your records, and need not be mentioned here.

SUPPLEMENTAL TO PHYSICIANS OF JACKSON COUNTY

Dr. A. G. Osterman of Seymour has furnished me some additional history of the early physicians of Jackson county (see p. 138).

Among the earlier physicians was Dr. John Tipton Shields, born in 1818. He located at North Vernon, where he practiced for a few years, then removed to Jackson county, where he practiced until the time of his death, Jan. 13, 1907. Dr. William Bracken practiced a short time at Reddington (1837). Drs. David and William Vanoose (Vannise) practiced at Rockford in the early thirties. Among other physicians who located there were Drs. Crippen, Wiles, Batman, Lime, Woodward, Hagen, Brandt, Williamson, and Hillis. Dr. James H. Green was born in Jefferson county Dec. 19, 1824, and died March 17, 1901. Dr. Jasper R. Monroe was born in Kentucky in 1847. He practiced at Rockford and Seymour up to the time of his

death, which occurred about 1881. Dr. Louis J. Stage was born in Clearfield county, Pa., April 30, 1821. He practiced at various places in the county and died Jan. 15, 1880, at Vallonia. Dr. W. C. A. Bain was born Dec. 5, 1819, in Trimble county, Ky. He practiced principally at Brownstown, where he died March 4, 1894. Dr. John Louis Ford was born in Woodford county, Ky., 1818. He died at Brownstown where he practiced for many years. Dr. A. L. Newkirk was born in Hamilton county, Ohio, Dec. 4, 1826, and practiced at Seymour, where he died in 1885. Dr. Philip Rosegan was born at Coblenz, Germany, June 20, 1827; was graduated from the university at Bonn, 1848. Practiced principally at Dudleytown, and died in Columbus, June 14, 1893. Dr. Samuel Coryell was born in New York 1819. First practiced near Paris Crossing, then removed to Crothersville, where he died in 1890. Dr. George Chutes was born June 8, 1825, at Washington, Ohio; died at Free-town in 1882. Dr. Grofton Manuel was born Aug. 12, 1834, in Ohio; he practiced in Free-town where he died in 1895. Dr. Marshall Vance Wilson was born in Lawrence county, Ind., March 9, 1839. Located at Medora, and practiced there until his death, Feb. 10, 1907. Dr. F. W. Gibson was born in New Hampshire, May 12, 1831; died at Vallonia, Feb. 12, 1870. Dr. Victor Hugo Monroe was born near Rockford, Aug. 8, 1852, and died at Seymour in 1894. Dr. Samuel Wells practiced at Clearspring in this county for many years. I could not get his history. I could get no history of Dr. A. M. Thompson, who practiced at Houston in 1835, nor of Dr. E. P. Reed. Drs. John Long, and Tinch died at Brownstown. Dr. Frank Ewing was born near North Vernon in 1851; practiced at Vallonia, where he died in 1897. Dr. John Quincy Orvis was born in New York; practiced at Seymour from 1876 until his death, which occurred in 1896.

ADDITIONAL INDIVIDUAL NAMES

HARDMAN, JACOB.—South Bend (1804-1885). Dr. Hardman was born in Virginia, April 29, 1804, and died at South Bend July 21, 1885. He located in South Bend in August, 1831, and practiced until 1859, when he retired from active work.

He rendered medical services at Camp Morton, during the early part of 1861, and later for a time at Nashville, Tenn. He helped to organize the first Methodist Episcopal Church, and also Sunday School in South Bend. He was a member of the first medical society, and president of the first temperance society in the county.—Miss Margaret Hardman, Marion, Ind., Daughter.

JAMESON, PATRICK H.—Indianapolis (1824-1910). Dr. Jameson was born in Jefferson County, Indiana, April 18, 1824, and died at Indianapolis,

October 7, 1910. He located in Indianapolis in September, 1843, and remained there until his death. He was a public spirited citizen, and his influence was felt in all departments of state and city government, filling many offices of honor and trust. He was present at the State Medical Convention, June 6, 1849, and was next to the last of the number to pass away, being survived by Dr. W. H. Wishard. He contributed an article to the State Society on "*Veratrum Viride*," Trans. 1857, p. 35, also an article on "*Memoirs of the Professional Lives of Drs. John S. Bobbs, Charles Parry, Talbott Bullard and David Funkhouser*," Trans. 1894, p. 212a. On the 16th day of December, 1909, on the anniversary of my 70th birthday, I sent a card to Dr. Jameson, and received a letter from him, in which he wrote: "I now wait patiently—not unhappily—like a passenger at some lonely way station for a delayed train which shall bear me to my destination. But still, in the final accounting, our lives will be measured not by their duration, but by their achievements." Peace to his memory. For a detailed biography see Stone, p. 249.—G. W. H. K.

MULLEN, JOHN W.—Madison (1821-1887). Was born in Mount Joy, Pennsylvania, in 1821. When quite a boy, he went to Texas and served as a page under Gen. Sam Houston during the war between the Lone Star State and Mexico. During this campaign he had the misfortune to be taken down with yellow fever and was faithfully nursed by one of the men until he was supposed to have died. Around his belt he had concealed about \$1,250 of Texas script. The nurse took \$1,000 of this and left a note with the remaining \$250 for the person who would bury him. The doctor often told this experience in demonstrating that life was not always extinct when supposed to be. Becoming tired of Texas he returned to Philadelphia and entered the Pennsylvania University; graduated in medicine with honors, and was elected intern for two years at the Philadelphia City Hospital. Through the importunities of his friends and classmates he was induced to come to Indiana, and in 1847 located at Madison. Early in the fifties Dr. John Mullen, with five other leading physicians of the city, obtained a charter from the State Legislature for a medical school to be known as The Madison Medical Institute, and in a two-story frame building on the corner of East and Third Streets, commenced to give lectures to a class of students in Madison. A brick cottage to the north was used as a dissecting room. The demands of private practice were so great that the doctors found it impossible to keep all their lecture engagements, and the students becoming discouraged concluded to go to the University of Louisville. The school-room was turned into a hospital,—the first one ever established in Madison—and the brick cottage was converted into a pest house. Up to the time of his death, Dr. John Mullen took a lively interest in the advancement of his chosen profession of medicine, and kept himself well read in the science of that profession, often being called into consultation in cases where experience and sound advice were needed. He was regarded as one of the best surgeons of the state, and performed some of the most difficult operations. He died at his home in Madison, May 10, 1887.—Miss Cora E. Mullen, Madison, Daughter.

Dr. Mullen was present at the State Medical Convention, June 6, 1849.—G. W. H. K.

(To be Continued)

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EDITORIALS

IMPORTANCE OF URINARY EXAMINATIONS IN PEDIATRICS

With the definite establishment of pediatrics as one of the specialties of medicine, it is but natural to expect a corresponding increase in our knowledge concerning certain of the problems peculiar to that line of work. And one of the rewards that have come from a more thorough study of diseases of infancy and childhood is the frequency with which disorders of the genito-urinary tract are to-day being recognized and properly treated. Some months ago we considered editorially the excellent article of Morse's which appeared in a recent number of the *American Journal of Medical Sciences*, on colon bacillus infections of the genito-urinary organs in children. In that article, it will be recalled, Morse mentioned the rather surprising number of his cases that occurred in male babies as contrasted with the number in females, in the latter of whom we would, of course, expect to have the great preponderance of the lesion because of the ready accessibility of the urinary outlet to the source of infection. In his experience also, it will be remembered, the best therapeutic results were obtained not from vaccine therapy nor from urotropin, but from the alkaline diuretics, as potassium citrate.

In the *Archives of Pediatrics* for November, 1910, appear two most interesting articles illustrating the prime importance of careful urinary analyses in infancy, the first on "Pyelocystitis in Infancy," by Friedenwald, and the other on "Colon Infections of the Urinary Tract in Children," by Porter and Fleischner, of San Francisco.

The first article, that on pyelocystitis, is based on a study of a series of eighty cases, from a large foundling hospital, fifty-eight of which cases were in females and twenty-two in males. The colon bacillus was the common exciting cause, the proteus bacillus having been found twice and the lactis aerogenes once in the series. Three modes of infection are possible, viz.: (1) by con-

tiguity, i. e., by virtue of the close proximity of the female urethra to the anal orifice, easy passage is afforded the colon bacillus; (2) infection of the urinary apparatus direct from the blood, and (3) direct transmigration of the colon bacillus from a damaged bowel into the bladder. By a general lowering of resistance any of the acute infections may serve as a predisposing factor and during the year ending Feb. 1, 1910, one-half of Friedenwald's twenty-two cases occurred during a severe epidemic of grippe. Indeed, fifty-nine of the cases of this series were directly preceded by either some infection or an acute nutritional disorder.

Of twenty autopsies there were pathologic changes in the kidney pelvis and bladder in fifteen instances, while the pelvis alone were involved in only three, and the bladder alone in one case. In a single instance the lesion was a simple catarrhal inflammation which quickly subsided. Other case histories showing more severe lesions are presented, in which there developed colimeningitis, local necrosis of the bladder, acute parenchymatous nephritis, septic nephritis and abscesses of the kidney; or on the other hand the lesion may go on to a chronic stage, the relation of the condition to kidney lesions being very close, practically all severe cases showing at least kidney irritation, as observed by the common presence of casts in the urine of cases of pyelocystitis.

Clinically the mild form is associated with an elevation of temperature, some loss of appetite, some unrest, possibly vomiting and a peculiar pale appearance. The urine is acid, somewhat cloudy, contains some albumin, pus cells, bacterial clumps and some cubital or tailed epithelium. Any or all of the clinical symptoms may be absent in this form and the condition recognized only by routine urinary examination.

On the other hand, the severe type is characterized by an increase of the severity of the individual symptoms of the mild type, plus other and more grave symptoms, the temperature being higher, lasting longer and being either intermittent, remittent or continuous in type, falling either by lysis or crisis. Restlessness and agitation often alternate with periods of listlessness and quiet. Anorexia may progress to the extent of absolute refusal of any liquid. For the latter reason water hunger gives the most characteristic picture. Paleness increases, the eyes are wide open, expression anxious, the patient is very susceptible to touch, vomits and passes dyspeptic stools. The breathing is rapid but superficial, pulse fast, opisthotonos not infrequent and

sometimes marked. In the more severe cases jaundice is not uncommon, nor is edema and there is a tendency to hemorrhages, especially petechiæ. Tremors and convulsions may occur or the patient become soporous and finally comatose. The onset is sudden, the kidneys usually become enlarged, palpable and tender on pressure. Shaking chills have been noted. In addition to the urinary findings of the mild form, there may be red cells and various forms of casts. Different combinations of symptoms may form complexes closely resembling, and easily mistaken for, other diseases.

The course usually runs from ten days to three or four weeks, but may last many weeks or months, with a tendency to relapses, both in the mild and severe types, such relapses producing a graver complex than the original attack.

According to the type of manifestation the grave form may resemble, and has to be differentiated from, alimentary intoxication, pneumonia, meningitis, malaria and morbus Barlow.

The prognosis in the mild form is good but in the severe form always questionable, some of the later cases leading to rapidly fatal nephritides or going on to a chronic incurable type.

Therapeutic indications are the free introduction into the system of water, and the administration of urinary antiseptics, salol having proved more efficacious than urotropin, in Friedenwald's experience.

In closing the author emphasizes the "commonness of the condition, not only in female infants, but also in males; that both the bladder and pelvis of the kidney are usually involved, and, finally, that the systematic examination of the urine of infants is not only necessary, but will, in many instances, relieve the physician of much doubt and worry and lead to the relief of much suffering in many babies and also to the saving of many lives."

In their article on "Colon Infections of the Urinary Tract in Children," Porter and Fleischer lament the fact that hardly any other common affection that occurs in childhood is so often overlooked. The reason for this oversight is twofold: first, because the symptoms are so protean and often not referable to the urinary tract, and second, because the ordinary urinary examination will not reveal a colon bacilluria, cultural tests being essential in the vast majority of cases.

They find that although hematogenous infection with simple pyelitis may follow fissure in ano in constipated babies, yet by far the greatest number of infections are of the ascending variety,

the result, often, of careless and wrongly-directed cleansing of the buttocks in girl babies or the application of a too-tight diaper, forcing the fecal matter past the vulva. They have never as yet encountered the condition in male infants, although on the continual lookout for it. They also observed the symptoms to vary with the individual cases from a persisting bacilluria recognized only by careful urinary examination, to acute infections simulating typhoid or meningitis, with various intervening grades of severity. Leukocytosis is the rule but varied in the series from 12,000 to 37,000. Often the syndrome will be that of a gastro-intestinal intoxication with many greenish stools containing mucus, or the typhoid state may be simulated and a Widal reaction be present with a 1-50 dilution. One type of cases takes the form of so-called recurrent vomiting in children, or evidence of cerebrospinal irritation with rigidity of the neck muscles, and Dupré's symptom of meningism may be present.

Immediate examination of the urine, as soon as passed, by the high-power dry objective of the microscope will reveal the presence of many motile bacilli, which in over 87 per cent. of cases are colon bacilli. For cultural purposes, in boys the glans and meatus are cleansed as thoroughly as possible with a 1-2,000 bichlorid solution followed by sterile water and the child instructed to urinate in a sterile basin or flask from which an agar tube is directly inoculated. In girls the genitals are similarly cleansed and a catheter passed, although in older girls successful cultures have been obtained by voluntary micturition after cleansing, while the labia are held apart by the nurse.

While the prognosis for life is usually good, yet for cure it should be guarded since relapses are common and the colon infection of the urinary tract may persist from several days to several months or even years, in spite of any form of treatment.

Prophylaxis demands strict cleanliness of the genitals, and phimosis in boys should be relieved by circumcision.

If the attack be acute the child should be put to bed, given large quantities of fluid and a cathartic. In addition, 15 grains of urotropin well diluted should be daily administered. In the more intense, persistent cases the authors believe the only hope to lie in autogenous vaccines and these in the largest possible doses that fall short of producing a reaction, the injections to be repeated at four-day intervals.

The authors conclude by calling attention to the importance of culturing the urine in all cases of persistent fever of obscure origin in children, because this simple procedure will often clear up the diagnosis of a puzzling case.

EHRlich AND HIS WORK

A most interesting and apparently authentic account of the life and work of Paul Ehrlich is to be found in the December number of *McClure's Magazine*. At least from the foreword by Ehrlich himself, it may be presumed that the article is well authenticated.

Prefacing the biographic sketch by a short rehearsal of the rewards that have come to Ehrlich in the way of the Rockefeller Institute 1909 grant of \$10,000 and the Nobel Prize for 1908, for earlier scientific achievements, and the recent fame resulting from the discovery of his specific for human syphilis, Mrs. Marks, the biographer, quotes Herter's estimate of Ehrlich as being the "most original and picturesque of living investigators of medical science."

Born in 1854 from an immediate family of business men, Ehrlich probably received his scientific bent from his paternal grandfather who, at the age of 90, continued to lecture on botany and physics.

Curiously enough, but like many another genius, Ehrlich was a most indifferent student while in college, and his record in medical college was even worse, despite the masters under whom he was trained at Breslau, Strasburg, Freiburg and Leipsie. His lectures were cut regularly and his time spent in experimenting and trying to work out his own ideas. Failing in his final examinations, he was graduated at the end of another year only because his professors seemed to recognize his unusual talent.

Ehrlich's early work consisted in trying the effects of dye-stuffs on the various tissues of the body, whence followed in logical sequence the effects of his discoveries on histology, internal medicine, pathology, neurology, bacteriology, pharmacology, chemistry and studies of the protozoa and immunity.

Working on the basic theories that every living cell had a special affinity for some particular substance and that a given drug taken into the body is not equally distributed, nor does it equally affect the different organs and tissues, he proceeded to elaborate his triacid stain by showing its staining effect on the different blood-cells. To Ehrlich also belongs the discovery of the acid-fast property of the tubercle bacillus.

The first experiments made to prove the ingenious, and now important, side-chain theory of immunity were begun in 1891 when Ehrlich injected mice with gradually ascending doses of the active principles of castor oil and jequirity beans, by which he was able to establish immunity to the effects of these toxic substances, and this to measure quantitatively. From this it was but a step to the standardization of diphtheria antitoxin and later to the accuracy with which our modern vaccine therapy after Wright's method can be accomplished.

In the article by Mrs. Marks there follows a very practical elucidation of the principles of the side-chain theory of immunity that is perfectly adapted to the lay understanding, but unnecessary to review here, as only the most primitive elements are touched on.

After some little interesting work on cancer and its transplantation among lower animals, Ehrlich left this field to enter one which might be called "specific chemical therapeutics" and his first work in this line was on the parasite of sleeping sickness. Starting first with the dye-stuff trypan-red, Ehrlich was able to control the disease experimentally in mice but not in the human. Atoxyl likewise had its disappointments, until finally after 418 reduction products of arsenic had been made in the laboratory, he came on one, arseno-phenyl-glycin, which proved a specific for the disease in animals by a single injection, and which is now being tried on human beings in Africa with promise of considerable success.

After Schaudinn's discovery of the cause of syphilis, the *Spirocheta pallida*, Ehrlich set about to elaborate a remedy that would, by a single injection, cure the disease, with the apparent goal attained by the 606th combination made, which drug properly named is dioxydiamido-arsenobenzol. Six hundred leading authorities throughout the world are now trying out "606" and of the 10,000 records now held by Ehrlich, cure has attended the use of the drug in all but a minimal percentage, the failures having possibly followed the early, small and inadequate doses.

The remedy has proved very effectual also in the treatment of relapsing fever, by Iversen in Russia, and also in a spirillose disease that occurs in chickens.

Two or three personal traits of Ehrlich stand out in bold relief—his remarkably quick perception, his power of concentration, his penchant for amusement in the form of American dime

novels, and his vivid imagination, particularly what he calls his "chemical imagination."

Ehrlich is still a comparatively young man and through him many things may yet be in store for the science of "specific chemical therapeutics."

EDITORIAL NOTES

THE JOURNAL extends the compliments of the season to all its readers.

THE Association dues for 1911 are payable on January 1, and become delinquent on February 1. The amount is \$2. Pay it now. The secretary has a notice in this number concerning the subject.

THE index for the year is published in this number. Those who bind THE JOURNAL will find it to their advantage to send the twelve numbers for the year to the bindery at once, so that the completed volume can be preserved.

THE Governor has appointed the following board of trustees for the State Tuberculosis Hospital recently built near Rockville: Dr. Henry Moore, Indianapolis; Dr. Oliver V. Schuman, Columbia City, and Mr. Isaac Strause, Rockville. In this issue of THE JOURNAL we print a letter signed by one of the trustees, giving information concerning the appointment of a superintendent for the hospital.

SINCE the advent of antitoxin and its use in the treatment of diphtheria the opinion has prevailed that the serum should be absolutely fresh in order to be efficacious. This lack of confidence in old serums has been proved to be unfounded, as investigations carried on over a series of years have shown that old serums, unit for unit, are just as potent as fresh serums, and would perhaps be less apt to cause severe reactions than fresh serums.

LIVE stock owners throughout the state of Indiana are to be protected against incompetent practitioners of veterinary medicine and surgery. The new act went into effect on November 23, and provides that no one may practice without a certificate issued by the State Board without incurring the penalty provided for in the law. The certificate can only be secured by those who present satisfactory evidence that they were

engaged in the practice before 1891 or those who successfully pass the state examination.

It is suggested that those who wish to do medical work in Berlin should correspond with the permanent secretary of the Anglo-American Medical Association, who on request will furnish information concerning the medical courses obtainable there, the approximate cost, etc. Letters should be addressed to the secretary of the Anglo-American Medical Association, 105 B Friedrichstrasse, Berlin, Germany. Dr. H. O. Bruggeman of Fort Wayne, who for several months has been doing post-graduate work in Berlin, is at present the president of the Anglo-American Medical Association at Berlin.

SLOWLY but surely the pure food laws are exerting their influence for the betterment of the public health. Early this month the United States assistant district attorney seized 21,338 pounds of canned eggs which were confiscated as unfit for food. The eggs were found in a local refrigerating company's warehouse in Chicago, and the samples examined showed the presence of "filth, adulteration, putrid matter and decomposition." The Chicago health authorities say that for months Chicago has been the dumping ground of tons upon tons of preserved eggs, most of which have been unfit for food, and a determined effort is to be made to stop the traffic.

FORT WAYNE has had an epidemic of lice in the public schools, and the city health department is authority for the statement that the manner in which the vermin is spread is by means of the new drinking fountains over which children get their heads together in an effort to see which shall be first to drink from the fountain. The medical inspector has succeeded in very largely ridding the schools of the vermin by recommending the usual effective treatment consisting of the application of coal oil to be left on the head over night and followed by rinsing the hair and head in vinegar the following day. The coal oil kills the lice and the vinegar dissolves the nits so that they can be washed out with soap and water.

It is nothing short of ridiculous that a person charged with a serious crime is placed under a bond so insignificant in amount that it can easily be met by one with even ordinary means. Recently a midwife in the city of Fort Wayne

was accused of performing a criminal operation which resulted in the death of her patient, and the evidence against her was so conclusive as to leave no reasonable doubt of her conviction on trial. In fact it was a positive certainty that she would be convicted, yet she was released on a bond of \$1,000, which she has forfeited, taking refuge in Germany. It would seem that a crime of such serious nature should demand a bond sufficiently large to afford reasonable assurance that the accused person will not be likely to forfeit it.

In his recent message to congress, President Taft again recommends the creation of a Bureau of Health. He also displays some sound sense in commenting on the opposition to the movement. He says: "I renew this recommendation. I greatly regret that the agitation in favor of this bureau has aroused a counter agitation against its creation on the ground that the establishment of such a bureau is to be in the interest of a particular school of medicine. It seems to me that this assumption is wholly unwarranted and that those responsible for the government can be trusted to secure in the personnel of the bureau the appointment of representatives of all recognized schools of medicine and in the management of the bureau entire freedom from narrow prejudice in this regard."

THE formation of an association of physicians to aid the State Board of Health in making the pure food and drug laws more effective, is a step in the right direction. The work of the Indiana Physicians' Pure Drug Association will be more particularly in the line of assisting in the enforcement of the pure drug laws, as the work of the state laboratory shows that the amount of adulteration, substitution and misbranding that is going on in the drug trade, manufacturing, wholesale and retail, is very much greater than would ordinarily be expected among a class of individuals having even ordinary honesty. The State Board has prosecuted several offenders and obtained judgment, but isolated instances where prosecutions have prevailed do not keep pace with the increasing number of violations of the law. Accordingly, it has been thought that if physicians in various parts of Indiana, who are in a position to discover gross violations of the law, will give assistance to the State Board, it will soon be so unpleasant for all violators that instances of adulteration, substitution and misbranding will be infrequent.

Dr. J. W. COBLENTZ and his Compound Oxygen Association, located at Fort Wayne, have been denied the mails on a fraud order which in effect says that he is engaged in carrying on a scheme to obtain money through the mails by means of false pretenses, representations and promises. On examining the medicines sent out by Dr. Coblentz as a cure for the morphin habit it was found that they contained morphin in essentially the quantities used by the patient seeking relief.

We might suggest to the postal authorities that there are some other quack doctors and medical fakes in Fort Wayne that could be investigated with profit and if investigated a fraud order probably would be issued against them. And we would like to inquire what the State Board of Medical Registration and Examination has done to revoke the license of Dr. J. W. Coblentz who has been convicted by the Government of fraudulent practices.

EVERY good thing is imitated, and now the Christmas Red Cross seals, issued by the National Red Cross Association, have an imitator in the shape of a label, issued by the National Anti-Tuberculosis Association of Chicago which, if all accounts be true, are being sold, not with a view to aiding some humanitarian work, but for the purpose of adding profit to the promoters. Even if the new labels are sold with the intention of using the proceeds for a worthy object, it seems a little unfair to imitate the plan of the Red Cross Association, not only in the form and appearance of the label but in the manner of its disposition. The enterprise is not recommended to the public for support, and those who are interested in the Red Cross plan, as carried out in this and previous years, are asked carefully to investigate the seals before buying them, and to see that the seals are stamped as having been issued by the American National Red Cross Association, and have stamped on them the red cross instead of the cross in black which has been used by the imitators.

"MOTHER" EDDY has at last gone to her long expected reward, and much to our surprise her managers and confidential advisers, who have controlled her destinies for several years, are really admitting that she is dead. They announced that she died on Saturday, December 3, at her home in Boston. We are even wondering if she is really dead or the Christian Scientists are just imagining that she is dead. But

then, aside from all levity, "Mother" Eddy's teachings have probably been beneficial to a lot of neurotics and people with imaginary ills, even though it is a well established fact that many sufferers from pathologic lesions which might have been relieved by appropriate and timely treatment have been led astray by the fanatical doctrine known as Christian Science, of which "Mother" Eddy was the founder. Christian Science has had a rather remarkable growth, but there is ample evidence that it is on the decline, and it is probably only a question of time until it will cease to be more than a memory, and in that respect it will follow the course of innumerable fads which have had their day and disappeared never to return. Perhaps the death of "Mother" Eddy marks the beginning of the end.

Now that Vincent's angina can be definitely diagnosed by the presence of the *Bacillus fusiformis*, there probably will be a diminution in the number of cases of diphtheria diagnosed from clinical appearance. It is quite true that among the cases of suspected diphtheria perhaps the majority will turn out to be true diphtheria, as evidenced by finding the *B. diphtheriae*. But in not a small proportion of the cases will it be found that the *B. fusiformis* is the predominating organism. These cases of pseudo-diphtheria require active attention to prevent spread of the infection, and while there is some division of opinion as to appropriate treatment, yet the prognosis generally is considered favorable under most any kind of antiseptic treatment. Some authorities have even recommended the use of antitoxin in the treatment of an uncomplicated Vincent's angina, on the theory that there is a relationship between this disease and diphtheria. Certainly if there is the slightest question of doubt as to the presence or absence of the *B. diphtheriae* there is absolutely nothing to be gained by delay in the adoption of the antitoxin treatment, and no harm occurs if the subsequent diagnosis goes to show that the trouble was due to the *B. fusiformis*. It should be remembered that the ulcerative form of Vincent's angina is merely a later stage of the membranous form. Constitutional symptoms are slight or absent, but the local affection is more pronounced than in diphtheria. The prognosis is favorable, and complications are infrequent and usually insignificant.

THE members of the Anti-Vaccination League have repeatedly asked why Dr. Osler has never come out in defense of vaccination, and they have

led the public to believe that Dr. Osler does not believe in vaccination. In a recent issue of the *American Magazine*, Dr. Osler gives a review of the world fight against physical pain and suffering, and defends vaccination. He also issues a unique challenge to the anti-vaccinationists which we hardly think will be accepted. He says: "I will go into the next severe epidemic with ten selected vaccinated persons and ten selected unvaccinated persons. I should prefer to choose the latter—three members of parliament, three anti-vaccination doctors, if they could be found, and four anti-vaccination propagandists. And I will make this promise, neither to jeer nor to give jibe when they catch the disease, but to look after them as brothers, and for the four or five who are certain to die I will try to arrange the funerals with all the pomp and ceremony of an anti-vaccination demonstration."

We believe that the best way to prove the efficacy of vaccination and the fallacy of the teachings of the Anti-Vaccination League is to insist that Dr. Osler's challenge be accepted. Of course the value of vaccination has been tested in a similar way thousands of times, but the anti-vaccinationists do not accept such proof, and perhaps they would not accept proof obtained by submitting members of their cult to the ravages of such a loathsome disease as small-pox. But at any rate a great many members of the public who are really sincere in their doubts as to the efficacy of vaccination would probably be convinced.

THE doctor who pays a fabulous sum for an elaborate cabinet or some mechanical device for treating patients with various medicaments having fanciful names, whether such medicaments are volatilized, nebulized or vaporized, is contributing handsomely to the promoters of a scheme which has but little to recommend it other than a means of accumulating showy paraphernalia for the office, and unfairly deluding patients into paying for treatments which do not produce any better results than could be procured by means less spectacular and less expensive.

For the benefit of our readers we desire to say that we have repeatedly been approached by the manufacturers of various expensive cabinets recommended for the successful treatment of almost every ailment that the flesh is heir to, by the inhalation treatment, with an offer of advertising patronage. We have not felt warranted in accepting such advertising patronage, and for the reason that we could not conscientiously recommend the appliances which would be adver-

tised. We still maintain that attitude, and wish to go on record as saying that if any of the makers of cabinets for treating disease by the inhalation process will have their appliances investigated and approved by a committee delegated by the Council on Pharmacy and Chemistry of the A. M. A., we will not only accept the advertising from such a concern, but recommend the cabinet as being worthy of recommendation because of endorsement by a committee in whom the medical profession has no hesitancy in placing the utmost trust.

IN this number of *THE JOURNAL* we publish a letter from the secretary of the Indiana State Board of Medical Registration and Examination concerning the prosecution of violators of the Medical Practice Act. We are pleased to have an official opinion as to the proceedings necessary to secure conviction of violators of the Medical Practice Act, and we note with considerable satisfaction that the secretary of the Board will make the necessary affidavit in all prosecutions for practicing medicine without a license providing the proper information is given him.

We have always contended that the Board should be a little more active in efforts to secure the conviction of violators of the Medical Practice Act, and the public is not suffering any more from those who are practicing without the formality of securing a license than from those who are already licensed but who are guilty of gross ignorance as well as knavery in dealing with the sick and afflicted. The worst offender is the advertising quack doctor and, as we interpret the Medical Practice Act, it is possible to put the quack doctor out of business for wilfully defrauding patients. In reality the public should be interested in suppressing these fakers, but time will be saved if the medical profession as a profession becomes complainant and prosecutor. The work should not be left to the individual medical man but should have the authority and support of medical societies. With proper evidence at hand the charges should be filed by officers of the society and under the authorization of the society. The matter will not then appear as being one of personal antagonism, but rather the effort of a united medical profession to rid the community of medical pretenders and impostors, and we hope to hear more from the Board concerning this interesting subject. The columns of *THE JOURNAL* are open to communications from the Board or from members of the medical profession who desire to discuss the question.

WITHIN the last 30 days a man going by the name of E. L. Davis has been soliciting physicians in Indiana to take stock in the National Mercantile Rating and Credit Agency, in return for which an appointment as a confidential agent of the Agency is made. A prominent physician who accepted the proposition, and seems to have made sufficient investigation to make him regret the action, has furnished us with considerable information concerning the scheme, and volunteered the statement that as near as he can determine the facts the scheme bears a close relationship to fraud, and he thinks that the medical men of Indiana should be placed on their guard.

After having examined the stock certificate, agreement, receipt, and all papers issued pertaining to the scheme, we have no hesitation in saying that every doctor who is asked to take stock in the National Mercantile Rating and Credit Agency, reported as having offices in Milwaukee, Wisconsin, should take a long and last look at the twenty dollars which he pays for the beautiful engraved stock certificate issued to him providing he accepts the offer. Of course the "bait" consists in appointment as confidential agent to report on life insurance examinations and various forms of liability, for which fees are supposed to be paid. But even granted that the company is really organized for the purposes as set forth in the contract, it should not be necessary for any physician to buy his appointment by procuring stock in the agency. The whole thing looks tricky, and we have no hesitation in advising the medical men of Indiana to steer clear of the proposition until after they have thoroughly investigated it from every standpoint, not omitting an enquiry concerning the reputation and financial responsibility of the Agency at what is reputed to be the home office.

We shall probably have something more to say on this subject in the January number of *THE JOURNAL*.

The attention of members and especially secretaries of county societies is called to the following sections taken from the by-laws of the Indiana State Medical Association:

"Sec. 12. The secretary of each component society shall keep a roster of its members and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary. In keeping such roster the secretary shall note any

changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

"Sec. 13. The fiscal year for the Association shall be from January 1 to December 31, and all assessments shall be for the fiscal year and payable in advance. The secretary of each component society shall forward the assessment for his society, together with the roster of officers and members and list of non-affiliated physicians of the county, to the secretary of this Association on February 1 of each year, and he shall promptly report thereafter the names of any new members elected to membership in his society, and promptly forward to the secretary of this Association the assessment for such new members. The assessment shall be the same for all members and entitle the members to all the benefits, including the publications of this Association, from the time of paying the assessment to the close of the fiscal year only.

"Sec. 14. Any county society which fails to pay its assessment or make the report required by February 1 of each year shall be held suspended, and none of its members or delegates shall be permitted to receive any of the publications of the Association or participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met."

THE food and drug laws have been assailed on every hand by those who are profiting by the very evils which the pure food and drug laws are expected to correct. In the recent hearing in the Indiana benzoate of soda case, it was intimated that property interests should be taken into consideration when enforcing the pure food and drug laws, and in an encounter with Dr. Wiley in the course of cross examination, the attorneys for the manufacturers succeeded in getting a statement from Dr. Wiley which ought to have great weight in proving the necessity for the enforcement of any measure which has as its object the protection of public health. As stated by the *Journal of the A. M. A.* the following statements were made:

"These tests are immensely important to the business world and involve thousands of dollars in property and products," said the attorney for the manufacturers.

"I don't care a hang for the business world," Dr. Wiley replied, promptly, "what I care for is the health of the people."

"You consider that more important than the interests of those who have hundreds of thousands of dollars tied up in property and products?" asked the attorney.

"I most certainly do," replied Dr. Wiley. "Where there are thousands of dollars involved, there are millions of lives hanging in the balance which these investigations affect. It is these which I consider and not the business which may be done by any corporation."

Commenting on this the *Journal of the A. M. A.* says: "Friends of the national Food and Drugs Act and advocates of its proper enforcement are certainly under obligations to the attorneys for the manufacturers for giving Dr. Wiley an opportunity to make such a straightforward statement of his position. The *Journal* and the medical profession have insisted from the beginning that the campaign was one of dollars versus lives. It was not to be expected, however, that the issue would be so clearly defined by the manufacturers themselves."

It requires no great amount of investigation to discover that the real opposition to the movement for the establishment of a national Department of Health comes from the "patent" medicine interests. These vultures who reap a harvest by preying on the sick and afflicted would be injured through the establishment of a national department of health, as they could not thrive in the light of information and recommendations such as a department of health would give to the public, and consequently they are really fighting for their lives. A few misguided persons of the pseudo-medical type have been led to join the ranks of the "patent" medicine crowd on the theory that the "Regular" medical profession will not only control the national department of health but seek to suppress each and every form of medical practice which does not conform to the precepts and standards adopted by that school. But if the subject is analyzed it will be found that no one school of medicine can control such a national department of health as is contemplated by the Owen bill, and that even if it could the functions of such a department will not be one of regulating therapeutics or the treatment of disease.

In his last message to Congress the President has very frankly expressed his recommendation of the movement for the establishment of a national Department of Health, and given good reasons for believing that the agitation in opposition to the movement is not founded on right motives. The fact that the "patent" medicine

interests are spending hundreds of thousands of dollars every month in newspaper advertising alone, for the purpose of gaining the support of the public in their fight against the Owen bill, ought to be sufficient to convince any fair-minded person that the "patent" medicine interests will be hurt or they would not be taking such an active interest and would not be expending such large sums of money in attempts to defeat the bill. In other words, it is simply a question of permitting or suppressing one of the species of traffic in human lives which brings about the present fight on the Owen bill.

DR. E. A. CRULL, secretary of the city board of health of Fort Wayne, has asked the police department to assist him in enforcing the ordinance prohibiting spitting on sidewalks and in public buildings and conveyances. The ordinance has been on the books for six years, but beyond a few printed notices posted in public places, and a spasmodic effort or two into bluffing the people into obeying it, nothing has ever been accomplished toward its enforcement.

Here's hoping that Dr. Crull will be successful in his crusade, but we are willing to bet a dollar against a punched nickel that his efforts will fall as flat as the efforts of his predecessors, some of whom were just as earnest and perhaps just as active.

We contend that an anti-spitting ordinance is an excellent one and should be enforced, but the evil which it is intended to meet is so widespread, and such wholesale convictions would be necessary in order to effect any results, that it seems a Herculean task to accomplish any lasting results. To be effective it will be necessary constantly to prosecute offenders and never relax any vigilance required to obtain evidence that will insure conviction. We believe that if one or two offenders are fined in police court every morning over a period of about five years it might be possible to educate the public to the point where spitting on the sidewalks or in public buildings or public conveyances would be a thing of the past. But whereas the Fort Wayne public would be educated, what about the traveling public and the people coming from localities where there are no anti-spitting ordinances? Of course ignorance of the law excuses no one, but would it not keep officers busy in arresting transients, and will not the police court be filled up with culprits who are guilty of violating the anti-spitting ordinance, even though Fort Wayne has been properly educated?

We are not disposed to throw any cold water on the activity of Secretary Crull in his efforts to enforce existing ordinances, for we believe that he should be supported, but we only want to point out that if any good is to be accomplished from enforcing the anti-spitting ordinance the officers will have to make arrests every day in the year and keep at it for all time. In no other way will good results be accomplished.

BRONCHIAL asthma is considered by practically everyone as based on a neurosis, and as a rule there is some pathologic cause for the neurosis which if discovered and appropriately treated will result in curing the patient. Of late much has been said concerning the use of the bronchoscope in the treatment of bronchial asthma, and some writers go so far as to say that the mere introduction of the bronchoscope during an asthmatic attack has been sufficient to give the patient not only immediate relief but relief which has continued over a period of several months or even several years. It seems almost incredulous that reports of this kind can be true, and if true we are forced to the conclusion that bronchial asthma is a condition warranting the trial of almost any form of treatment, no matter how illogical it may seem, in an effort to give the patient relief.

Every practitioner of experience has known of asthmatic cases that have been relieved by removing certain definite pathologic lesions in various parts of the body, and in such instances it has been easy to trace the relationship between cause and effect. But when it comes to claiming permanent cures for asthma by an inspection of the bronchial mucosa through a bronchoscope it appears that we are adopting the methods of the charlatan without being able to give a reasonable explanation for the treatment adopted.

It may be that the application of the 20 per cent. solution of cocaine to the bronchial mucosa, as advocated by some bronchoscopists, will relieve the patient temporarily and control the paroxysm for the time being, but we utterly fail to see how such treatment can produce any lasting results, and certainly the continued use of the cocaine for the relief of recurring paroxysms is as objectionable as the continued use of morphin which accomplishes the same result.

If our friends, the laryngologists, could as a result of the use of the bronchoscope detect a pathologic condition and by applying appropriate treatment to that condition cure the asthma, there would be some relationship between cause and effect. But when it comes down to the rec-

ommendation of the use of the bronchoscope and one application of cocaine as a cure for asthma which has persisted for months or years, we feel warranted in asking our brother practitioners to be a little more temperate in their recommendations.

DR. HURTY of the state board of health will recommend the passage of quite a number of laws or parts of laws by the next legislature and it is to be hoped that his recommendations will receive favorable consideration. His program is as follows:

"Medical inspection of schoolchildren.

"Regulation of building of schoolhouses and providing that every schoolhouse built hereafter must be approved by the state board of health and must be sanitary in every particular.

"Additional legislation governing the pollution of streams.

"Additional legislation protecting the water supplies in the state.

"Additional legislation governing the construction of sewers and lodging in the state board of health the supervision of sewer construction so as to guarantee scientific sewerage systems.

"The enactment of legislation tending to reduce blindness by compelling physicians and midwives to give proper attention to the eyes of children immediately after birth.

"Legislation to control hydrophobia by placing an additional tax on dogs with which to raise and maintain a fund from which to establish and maintain a Pasteur institute for free treatment of the victims of rabid dogs.

"Giving the inspectors of the state pure food and drug department authority to inspect weights and measures and to file affidavits for maintaining false weights and measures and making it incumbent on prosecuting attorneys to prosecute.

"Amending the pure food law so as to make it possible by the insertion of the word 'himself' to prosecute the owners themselves of dairies and creameries who are found to be adulterating milk and milk products.

"Amending the pure food law so as to prevent the traffic in decayed eggs by the insertion of the word 'knowingly.'"

The bill for the medical inspection of schoolchildren is mentioned first and there is practically no doubt of the passing of such a law, so great has become the public demand for it. A bill to this end was introduced two years ago and passed the senate, only to be defeated in the house by the liquor interests that were willing to sacrifice innocent schoolchildren in order to "punish" the author of the bill, who was a demo-

crat but who refused to vote for the repeal of the local option law. The protest that went up against this infamous slaughter of a good bill did much to awaken the people of the state to the crying need for medical inspection in the schools, and there will probably be no opposition to the measure which Dr. Hurty will present this year. Hundreds of defenseless children are sacrificed each year in the insanitary schoolhouses of Indiana and that remedial legislation was not long ago enacted is a disgrace to this great commonwealth.—*Fort Wayne News*, November 29.

To the Secretaries of the County Societies:—

Let this remind you, if you have not already done so, to collect \$2 from each member for the year 1911, and remit with list of names entered on the blanks recently sent you. You will save yourself unnecessary correspondence by filling out all data required for new members who joined during the year 1910, and by accounting for all members that belonged a year ago and do not now. Before writing look over the 1910 list you sent in and account for all who are not members for 1911.

This office will supply you with as many application blanks as you can use, as well as application blanks for the A. M. A. membership. Write for what you need, and above all do not suffer the embarrassment of being asked for such a blank by a prospective member, when you have none to give him. I expect to keep the card index of members correct up to the minute, and so will insist on every original application blank being sent to me, along with the dues, and it must be filled out completely.

This system will be a failure unless each secretary sends a monthly report of all removals, suspensions, reinstatements, and deaths of members.

The county secretaries should know that a full report covering all these particulars for the entire state is required of me every month, and without your assistance the report will be meager and correspondingly worthless.

Kindly send me a copy of every program for the year 1911 for me to file. This is multiplying the duties of the secretary, but it only serves to emphasize the plea made to all societies which have not yet elected officers for 1911, to get a secretary who during his term of office will put that position first, subordinating all other organizations, lodges, hobbies and even practice, whenever any of these prevent attendance at all the meetings and prompt performance of all duties. Every secretary will receive the membership

cards for his entire society, and in addition a receipt showing that each member has paid his subscription to *THE JOURNAL*. It will be your duty to distribute both cards and receipts to the members.

Read again the letter in the November *JOURNAL*, and collect the dues before January 1.

CHARLES N. COMBS, Secretary.

THE chairman of the Committee on Preventable Blindness has had some interesting correspondence with some of the prominent firms of manufacturing chemists concerning a medicine dropper to be used in connection with nitrate of silver solution for the prevention of ophthalmia neonatorum. The committee intends to recommend some kind of a package containing a dropper, nitrate of silver tablets for making fresh solution and perhaps a retainer for the solution, all to be in a neat and convenient form for carrying in the obstetrician's instrument bag.

In discussing this subject with one of the firms of manufacturing pharmacists having an ophthalmia neonatorum outfit on the market, it was discovered that the firm in question has not been particularly friendly to the medical profession, and in addition to this has exploited a number of nostrums and been among the number who are manufacturing "dope for quackery." The attention of the firm was called to this reputation and incidentally they were asked why, when seeking the patronage and good will of the medical profession of Indiana, they did not advertise in *THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION*. They evaded the issue by saying that they could not see why making dope for quackery or advertising in medical journals would make their products or devices any more valuable in the amelioration of disease. They closed by saying that if their products do not appeal to a physician on merit they have no desire to have them utilized.

This may sound very well for the manufacturing pharmacists but it does not sound well to physicians who contribute to the success of such concerns. The truth of the matter is that doctors are considered "easy marks" and they are exploited more often than any other class of people. The medical profession has a right to demand, and is demanding through the Council on Pharmacy and Chemistry of the A. M. A., that all drugs and pharmaceutical preparations shall possess the merit claimed for them, and be of the quality represented. There are some firms that are honestly striving to maintain a standard of quality that is unquestioned, and at the same

time they are making an effort to show appreciation of the support of the medical profession by conduct befitting those who are under obligation.

The matter of advertising in journals owned by the profession is one to be decided by those who use advertising for the extension of business, and we are not disposed to criticize any one who feels justified in refusing to advertise in *THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION*. However, the progressive medical men of Indiana own *THE JOURNAL*, and are interested in its success. *THE JOURNAL* gives value received for every dollar turned in to it for advertising. But aside from this there is a relationship existing between the advertiser and the owners of *THE JOURNAL* which does not exist between the advertiser and the journal owned by an individual or a company for private gain. The owners of *THE JOURNAL* feel that they owe some support to the advertiser, and the advertiser feels or should feel that in soliciting and receiving the patronage of physicians who own *THE JOURNAL* they are under some obligation to show equal courtesy by reciprocating in favors.

We shall meet the point squarely in this instance by saying that so far as the making of an ophthalmia neonatorum outfit is concerned, any one of a half dozen good manufacturing chemists can supply such an outfit as desired. The firm with whom the chairman of the Committee on the Prevention of Blindness has been corresponding, aside from the fact that it does not advertise in *THE JOURNAL*, is not particularly deserving of favors at the hands of the medical profession. On the other hand, there are three or four of the best known pharmaceutical houses in the country who are advertising in *THE JOURNAL*, who have always given encouragement to enterprises guided by the medical profession, and as they can supply such an outfit as the Committee on the Prevention of Blindness desires to recommend, there is absolutely no reason why such firms should not be given preference over firms which show the medical profession of Indiana no favors.

We believe in reciprocity, and while we are not going to "knock" against any firm because it does not advertise in *THE JOURNAL*, we are going to emphatically advocate the support of those firms that advertise in *THE JOURNAL*, for we take no advertising except from firms that are absolutely reliable in every particular.

SAMUEL HOPKINS ADAMS, in his series of articles on the nostrum evil and quacks, printed in *Colliers Weekly*, said that if he were organiz-

ing an American Institute of Quack Specialists, he would select Dr. Oren Oneal, of Chicago, as its first president. Dr. Oneal is rated as a high class eye quack who undertakes to cure incurable blindness. In passing it may be said that Dr. Oneal's familiar advertising is seen in many newspapers circulating in Indiana, and in an occasional magazine whose editor has not yet reached the point where he feels that he can afford to cut out the income from quack advertising.

But there is another eye quack who is bidding for honors in the field of charlatanism, and his name is F. Geo. Curts, with offices in Kansas City, Missouri. This faker, who pursues a similar course to that of Oneal, of Chicago, in deluding his victims, advertises on his letterheads to cure all eye and ear diseases. To one of his victims, a poor woman who has been contributing money to him for months, he writes as follows:

"Mrs.

.....

"I don't know what I can say more than what I have already said to you of the necessity of continuing my treatment for your eye affliction—cataract—if you expect to get well. You certainly know that delay and neglect mean only disaster in the end. Then why in the name of humanity do you totally ignore my importunities?

"I know by experience and observation with just such cases as yours that you are slowly and surely meeting your fate—inevitable blindness. Certainly after what I have said to you you do not contemplate an operation; I sincerely hope and pray that you do not. I would rather see you go to your doom and meet it in the natural way than to hasten the end with the surgeon's knife. But listen, why do either when I offer you a treatment that cannot possibly do harm and yet has cured thousands of cases just like yours?

"I know you are discouraged and despondent: you have tried this and that thing until you have given up all hope and now are almost resigned to take things as they come." Cheer up, friend, while there is life there is hope. As far as I am concerned I am absolutely certain that I can and will save your sight if you will but rely on me. The thing for you to do is to satisfy yourself about a certain treatment then stay with it until you get the results. This is the sort of determination that reaps its reward. If you would only do this, I know you would renew my treatment and have a change of remedies regularly every thirty days for the reason that as the disease changes the medicines must be changed

accordingly to accomplish the best results, and make me a report every fifteen days for none can stand the strict investigation that the Mild Medicine Method will bear.

"Cataract is an awful thing. You are most surely on the road to total blindness if you neglect proper treatment. Were I not positive I could cure you I would not be so insistent. You have started my treatment and I won't give you up. Act on my advice Mrs. for the next month's treatment may be the turning point in your condition.

"You know I feel a deep interest in your case and I want you to at least do me the justice to write me a few lines advising me what you intend to do. As I explained to you in my last letter if you have not the money to send with your order I will accept your note for thirty or sixty days. I am enclosing a note in this letter. Of course I don't know whether it is the money matter that is keeping you from continuing the treatment or whether it is simply a case you have permitted yourself to become a little discouraged, but I am interested because I feel that it is a duty I owe to you to save your sight and if I were not absolutely certain as to the results that would follow I would not say so.

Most sincerely,

F. G. Curts, M.D."

Can anything be more damnable than the plea which this man Curts makes for a contribution to him for treatment which he positively knows will produce no benefit? The most astonishing feature is the fact that the Board of Medical Registration and Examination in Missouri will permit a man such as Curts to practice medicine, or that the Board of Illinois will allow Oneal, another villainous quack, to continue his illegitimate practice. Furthermore, we fail to understand why the postoffice authorities do not suppress both Curts and Oneal for using the mails for fraudulent purposes. Both men might also be prosecuted for obtaining money under false pretenses.

CORRESPONDENCE

A LIVE MEDICAL SOCIETY

COLUMBIA CITY, IND., Nov. 8, 1910.

To the Editor:—I wish to call your attention to the fact that Whitley county has a real live medical society; not so very large in numbers but very large in enthusiasm and each member is a live wire.

At our last meeting, November 1, we had the following program: a paper on "Hemorrhagic Pancreatitis," by Dr. H. A. Duemling of Fort Wayne, with report of two cases; a report of a case by Dr. Souders; a report of a case by Dr. F. G. Grisier, and a report of a case by the writer. While the program was not very large, the earnestness and the interest in the one paper read and in the cases reported would do credit to any society. We are anxious to have all the doctors of the county interested in our medical society, as we want their combined efforts to help us make our society one of the best in the state.

After the last meeting, Dr. Alice B. Williams, secretary of the society, entertained the doctors with a four-course luncheon, and as doctors are gormandizers they had ample opportunity to and did dilate their stomachs to the limit, for all things provided to eat and drink were tempting in appearance and very palatable.

We always entertain after each meeting, and our dear brothers in the county who are not members of the society and who see this are invited to come in and join the society. You have been invited repeatedly. We need you and you need us. You need the benefits that are derived from these meetings as well as we do; so come along and help.

Very respectfully yours,

D. S. LINVILL, M.D.

[This is indeed encouraging, coming as it does from a county where for many years the only medical society in the county was one that existed on paper and made no pretense of holding meetings.—Ed]

DISSATISFACTION WITH THE BOARD OF MEDICAL REGISTRATION AND EXAMINATION

Nov. 25, 1910.

To the Editor:—Your editorial gave expression to some of the dissatisfaction that is felt by the medical practitioners of this state with the Board of Registration and Examination. The matter ought to be thoroughly discussed by the profession, and some relief should be demanded from the legislature.

Everyone agrees that the Indiana Medical Acts have totally failed of accomplishing their professed purpose, and they have proved burdensome to the doctors and utterly useless to the public. The expense of maintaining the Board is thrown on the regular school, with about 4,500 practitioners, and with them 300 Eclectics seem disposed to combine; and yet on the Board these

4,800 are outvoted, two to one, by representatives of some 500 practitioners of other schools.

It would be unavailing to make complaints if a remedy cannot be suggested. The simplest amendment is to substitute for the Board a salaried Registrar, and let it be his duty to place the names on the register of all persons entitled by law to practice medicine in this state, taking all needful precautions against fraud. The several "schools" should select medical examiners and the governor would appoint them on the recommendation of the state societies of each "school." Thus, each "school" would practically support its own board of examiners, and recommend for registration those qualified to practice.

Since the Medical Act was passed there have been many efforts to secure registration for persons who only study a small part of medicine, and thus to place them on a par with those who take a complete course. It becomes intolerable when the schools of limited medical education are represented on the Board. ——— M.D.

PROSECUTION OF VIOLATORS OF THE MEDICAL PRACTICE ACT

INDIANAPOLIS, Dec. 1, 1910.

To the Editor:—In THE JOURNAL of the Indiana State Medical Association, issued November 15, I notice under "editorial notes" that you commend the Adams County Medical Society for taking the initiative in the prosecution of violators of the Medical Practice Act. I wish to assure you that your words of commendation were well deserved. I hope you will continue to give encouragement and information concerning the execution of said law.

The president of the Cass County Medical Society has filed charges against Dr. C. D. Pettigrew of Logansport, asking that Pettigrew's license be revoked, specifically setting out, as the law requires, that Dr. Pettigrew is guilty of gross immorality by causing to be published "false, fraudulent, misleading, licentious and immoral statements." This case will be heard by the Board December 6, at Room 120, State House, Indianapolis. I should like to say in this connection that the Cass County Medical Society is one of the best organized and most energetic societies in the state. The work of this society in the matter of executing the medical law and purging Cass county of disreputable practitioners should be emulated.

The statutory grounds for the revocation of a license are as follows: "If any person shall be guilty of felony or gross immorality, or addicted

to the liquor or drug habit to such a degree as to render him unfit to practice medicine or surgery, or shall have procured his license or certificate by fraud or misrepresentation, the Board may, after notice and hearing, revoke any license, provided a specific written charge verified by affidavit be presented to the Board, making definite and specific charges of such facts against the holder of such license. The Board shall thereupon fix a time for hearing such charges, at which time the person charged may appear and defend against same."

The term "gross immorality," as used in the statute, is usually given a broad interpretation by the courts. The offence of practicing medicine without a license is a misdemeanor, and may be prosecuted either by indictment or by affidavit and information. The latter method is the quicker and surer.

The secretary of the State Board of Medical Registration and Examination will be glad to make the necessary affidavit in all prosecutions for practicing medicine without a license, provided the proper information is given him, viz.: (1) the full name and address of party accused; (2) the full name and address of two or more patients who informant knows to his own personal knowledge have been treated by accused; (3) have the president or secretary of your county medical society write the secretary of the Board of Medical Registration and Examination, giving their O. K. to said information.

Information coming through such a source and as indicated will always receive prompt attention. Letters complaining that some doctor is practicing medicine without a license are entirely insufficient and no action can be taken unless information as set out above is furnished.

After preparing and signing the affidavit, the secretary of the State Board will forward the same by registered mail to the prosecutor of the county where alleged illegal practice occurred.

Prosecutors ordinarily do their duty and proceed at once. However, there are, I am sorry to say, some prosecutors who do not act with great celerity, and need to be made to feel the importance and influence that honorable medicine holds in his county. Correct blank forms for prosecutions should always be obtained from the office of the secretary.

The present medical law should be strengthened and I shall be glad to discuss the weak spots in the law if desired.

Very respectfully,

W. T. GOTT,

Secretary of the Indiana State Board of
Medical Registration and Examination.

DEATHS

DR. HUGH L. KIMBERLIN, aged 78, died at his home in Mitchell, December 5.

MRS. SARAH BOSWORTH, wife of Dr. Richard Bosworth, a retired physician of Winchester, died suddenly, November 7.

DR. WILLIAM J. BARTMESS, 76 years of age, a retired physician of Ellsworth, Ind., died December 4 from blood-poisoning.

MRS. LUCINDA POWERS, widow of the late Dr. James H. Powers, died at her home at Albany, Ind., November 26, following an illness of acute bronchitis.

DR. WILSON LOCKHART, formerly of Danville, Ind., elected vice-president of the Indiana State Medical Association in 1864 and acting president in 1866, died recently at Seattle, Wash.

DR. ROBERT W. SMITH, a veteran of the Mexican War, died November 5, at the home of his daughter in Greenfield, aged 86. He was born in Kentucky, coming to Hancock county when 9 years old.

DR. J. M. SWEETZ, aged 81, the oldest physician in Ripley county, died November 30 at the Madison sanatorium, Versailles. He graduated at Cincinnati College of Medicine and Surgery in 1860.

DR. STILES R. FOX of Lafayette died at St. Elizabeth Hospital in that city, November 16, from paralysis, following an illness of four months. Dr. Fox was born Dec. 3, 1847, in Ohio, and had lived in Lafayette thirty-five years.

DR. SAMUEL M. RIED died at his home in Muncie, November 7, after an illness of three months, aged 67 years. Dr. Ried was born in Shelby county, Ohio, in 1843. He was city health officer of Muncie for many years. He was a member of the Delaware County Medical Society and of the Indiana Medical Association.

DR. EZRA B. EVANS, aged 65, died at his home in Greencastle November 9, following an illness of several months from tuberculosis. He was born in Owen county, Ind., Aug. 5, 1846, coming to Greencastle when a young man. He was a

member of the Putnam County Medical Society, the Indiana State and the American Medical Associations.

DR. JESSE M. JONES died at his home in Catact, October 30,, following a short illness from hemiplegia. He was born near Clayton, Hendricks county, Ind., March 7, 1835. He was a Civil War veteran, having lost his right leg at the battle of Baton Rouge. He located in Catact in the fall of 1860, practicing there until his death.

DR. M. G. PARKER, aged 91 years, died at his home in Danville, Ind., November 15, of senile debility. Dr. Parker was the oldest graduate of Rush Medical College, as also the oldest practitioner in Hendricks county. Dr. Parker practiced medicine until four years ago when he was stricken with blindness. His one diversion was playing the violin, of which he was a master.

DR. JAMES H. GREEN died at his home in North Vernon, November 21. He was born Oct. 19, 1859, and graduated from the Medical College of Ohio in 1884. He was a member of the U. S. Board of Pension Examiners, treasurer of the Fourth District Medical Society, and surgeon for the B. & O. S.-W. Railway and the New York Central. He was a member of the Jennings County Medical Society and the Indiana State and American Medical Associations.

DR. HANFORD BENEDICT died at his home in Springport, November 6. He was born near Monticello, Sullivan county, N. Y., June 26, 1837. Following his early education, which was obtained in the public schools and Monticello Academy, he came to Muncie in 1856. He graduated from the scientific department of Indiana University, receiving the degree of B. S., in 1861, and attended clinics at the University of Michigan, Ann Arbor, in 1862 and 1863, receiving his license to practice medicine in Indiana in 1863. He was a member of the Henry County Medical Society and the Indiana State and American Medical Associations.

NEWS, NOTES AND COMMENTS

DR. J. T. SPARKS, formerly of Yeddo, has recently moved to Alamo.

DR. GEORGE E. CLEMENTS of Crawfordsville is spending several months in the medical clinics at Berlin and Vienna.

DR. W. J. MITCHELL of North Vernon was elected clerk of the circuit court of Jennings county at the last election.

DR. GOETHE LINK announces that after Jan. 1, 1911, he will limit his practice to surgery, gynecology and obstetric operations.

THE body of Mrs. Lou Channing, widow of Dr. W. S. Channing, will be brought from Grand Rapids, Mich., to Pendleton, for burial.

DR. O. A. REA has recently moved from Culver to Rochester, and has resigned as secretary of the Marshall County Medical Society.

THE American Society of Medical Sociology has recently been organized for the purpose of studying radically all questions of a socio-medical nature.

THE commencement exercises of the Lutheran Hospital Training School for Nurses, Fort Wayne, were held Wednesday evening, November 23. A class of eleven nurses received diplomas.

SINCE the publication of the November number, the following members have been reinstated in the Indiana State Medical Association: Vigo County, Terre Haute—Jos. Frisz. E. J. Schott, Adams County, Decatur—H. E. Keller.

THE annual meeting of the Greene County Medical Society was held at Linton, Nov. 17, 1910. Papers on "Fatigue Neuroses," by E. R. Mason, "The Physical Basis of Habit Formation," by Frank B. Wynn of Indianapolis, and "Uterine Hemorrhage," by T. B. Noble of Indianapolis were presented. A smoker followed the scientific session.

DR. E. E. WISLARD, formerly of Indianapolis, but now a practicing physician of Noblesville, has made the Central Indiana Railroad Company defendant in a suit filed for \$25,000 damages for alleged permanent injuries. Last August, when attempting to cross the tracks of the company in

an automobile, he was struck by a freight train, which demolished the car and inflicted injuries on him.

SINCE the publication of the November number of THE JOURNAL the following articles have been accepted by the Council on Pharmacy and Chemistry for New and Nonofficial Remedies:

Theophyllin Sodium Acetate (Merck & Co.).

Syrup Thiocol Roche (Hoffman-LaRoche Chemical Works).

Protan & Opium Tablets No. 1 (H. K. Mulford Co.).

Protan & Opium Tablets No. 2 (H. K. Mulford Co.).

At the regular monthly meeting of the LaPorte County Medical Society held December 9, the following program was presented: General Subject: "How Shall the Physician Invest His Surplus?" "Farm Lands as an Investment" was presented by Dr. Bo Howell, councilor for the Tenth District; discussion opened by M. S. Smith; "City Real Estate" by O. L. Sutherland; discussion opened by Dr. J. N. Ledbetter; "Bonds and Mortgages," Dr. R. B. Short; discussion opened by J. W. Milligan.

THE Indiana Physicians' Pure Drug Association is a new organization formed by members of the medical and veterinary professions to support the state and national pure drug laws. Its officers are as follows: president, Edmund D. Clark; vice-presidents, F. C. Heath, Frank Morrison, T. C. Kennedy and I. H. Roberts; secretary, Charles E. Cottingham, all of Indianapolis. The association proposes to work for a sufficient appropriation from the legislature to provide ample machinery for enforcing the pure drug laws.

At the meeting of the Indiana Academy of Science, at Indianapolis, November 25, following the reading of a paper on "Plants and Man: Weeds and Diseases," by Dr. Robert Hessler, chairman of the Committee on The Restriction of Weeds and Diseases, in which the need for a National Department of Public Health was pointed out, the Academy unanimously passed the following resolution: The Indiana Academy of Science hereby endorses the establishment of a National Department of Public Health, such as or similar to that advocated by the Owen bill.

SOCIETY PROCEEDINGS

SIXTH COUNCILOR DISTRICT MEDICAL SOCIETY

The Sixth Councilor District Medical Society held its regular meeting at Liberty, Union County, Wednesday, November 25, with thirty-five members present. Dr. C. S. Hougland, the newly elected councilor of the district, was present and presided.

Dr. Garrett Pigman, of Liberty, presented a very interesting paper on Hydrophobia. He said that many physicians are skeptical as to the existence of hydrophobia, and even intimate that supposed cases of hydrophobia exist only in the imagination. He said that it was always well to consider the possibility of hydrophobia and be guarded in making a diagnosis. In suspected cases it is always advisable to have an examination made by the State Board of Health. He then reported a case as follows:

December 9, 1909, Mr. L., living five miles in the country, telephoned that his dog, a fox terrier, had been acting strangely for about a week, that he had been nervous, had run away from home, had snapped at the neighbors' chickens, and had bitten a pig and a calf. The dog came home and was permitted in the house, where he encountered a child, and without warning bit the hand of the child. The dog was then shut in the woodhouse, where a few hours later he was found dead. The dog's head was packed in ice and at once sent to the Indiana State Laboratory, and within a few hours telegraphic information was secured from Dr. Simonds to the effect that the dog's brain showed positive evidence of rabies. The little child that had been bitten by the dog was at once taken to Indianapolis and placed in a Pasteur institute for treatment.

In concluding the paper, Dr. Pigman said that vaccine is now furnished to physicians so that these cases of rabies may be treated at home in case a Pasteur institute is not available. There are several well-known firms who can and do supply the anti-rabies vaccine on short notice. This vaccine is a very perishable product, but it is sent to physicians, a dose each day in specially prepared vacuum containers which are non-conductors of heat and cold. Physicians are also supplied with full details as to manner of treatment, etc.

It has been demonstrated that a physician can successfully employ the preventative treatment at home and he is justified in doing so. It is always advisable to send the carcass or the head of the supposed mad animal that has bitten the person, to the bacteriological department of the Indiana State Board of Health for diagnosis. The department deserves commendation for its promptness and efficiency in reporting on this class of cases.

Following the scientific session an elaborate banquet was given by the Union County Medical Society. The date and meeting place for next year was left in the hands of a committee.

Adjourned.

W. A. THOMPSON, Secretary.

ALLEN COUNTY

Meeting of Fort Wayne Medical Society, October 18

Society met in regular session with twenty members present.

Clinical case reports. Dr. Bulson reported a case of Vincent's Angina. Patient, young man with sore throat, ulcerated tonsils and milky white membrane. Ordinary characteristics of syphilitic ulceration. Very slight rise of temperature. Only complaint was of pain on swallowing. Smear showed fusiform bacillus and spirilla. Diphtheria antitoxin given as a precautionary measure; also peroxid, chlorate of potash, tincture chlorid of iron and nitrate of silver used locally. Patient making good recovery. Case reported in hope that discussion would bring out the best treatment for this condition.

In discussing treatment, Dr. Dancer said he had used 10 per cent. solution of sulphate of copper.

Dr. Weaver said it is possible that latent diphtheria was present. Dr. Rhamy is of the opinion that the fusiform bacillus is in some way related to the diphtheria bacillus. Treatment should be some wash containing considerable oxygen.

Dr. Dancer reported case of little girl with Vincent's Angina who was given three doses of antitoxin. Patient recovered and room was disinfected. Later her little brother developed sore throat, but smear from his throat showed nothing. Smear now taken from little girl's throat, who was supposed to be well, still showed fusiform bacillus and spirilla.

Dr. Rhamy said he had seen a case of this infection last spring in a man weighing 180 pounds, with gangrenous infection of pharynx. In two weeks' time he lost 30 pounds in weight. He also said that in studying infections of mouth and throat it should be remembered that a smear will show most any germ, but it is only when an organism is present in abundance that proof of a certain condition exists.

In response to Dr. Boyers' question as to a possible recurrence, Dr. Bulson said that in a review of the literature he had noted some cases where there was recurrence. Dr. Bulson was of the opinion that these cases should be quarantined.

Dr. J. S. Boyers reported a case of boy, aged 15 years. Heredity good. Never sick before. Attended school two weeks before coming to Dr. Boyers. Temperature 102½, severe headache, tongue red. Suspected typhoid. Next day temperature 103½. On fourth day had eruption on abdomen. Typhoid symptoms continued for two weeks, when lung symptoms became more marked, two-thirds of right lung being consolidated. Sputum examination disclosed many tubercle bacilli. Dr. Boyers thinks this was case where tuberculosis developed rapidly because of the typhoid infection. Widal test at end of seventh day was negative.

In the discussion Dr. B. Van Sweringen said there is a question as to whether patient really had typhoid. From history he is under the impression that this case was one of tuberculosis from the start, especially so in the absence of a positive Widal.

Dr. Rothschild said that if this was rapidly developing tubercular infection Widal would be of no value as to diagnosis. Widal reaction may be positive in rapid, fulminating tuberculosis.

Dr. Weaver said Dr. Rothschild's statement was open to question, as the Widal was taken too early. If Widal was taken now condition would probably be found to be typhoid.

In closing Dr. Boyers said he is still of the opinion that this case was a combination, as it ran a regular typhoid course for two weeks and then showed lung complications.

Dr. Rhamy read a paper on "Chemistry of 606" in which he discussed the process of substitution in the benzin series which Professor Ehrlich has been using in his experiments on the parasitic infections. After testing 630 compounds Ehrlich has apparently found a substance that if given in a single large dose the parasitic action so far exceeds the organotropic action that the latter is comparatively insignificant. The substance has been patented to prevent imitations by cheap chemical houses and to assure uniform care and exactness in making. "606" is an unstable compound dispensed in the form of a hydrochlorid in sealed vacuum tubes. The water solution of the salt is very acid, hence painful on injection, and must be exactly neutralized just before use. Lesser's method of injection is most efficient and was described by the author. In all primary lesions of the erosive type the spirochete are destroyed by one dose of .6 gm. In extensive sclerosis a second dose may be necessary.

Dr. Weaver gave a review of literature on "606."

Discussion by Dr. Bulson who said, in referring to Ehrlich's statement that in atrophy of the optic nerve "606" should not be used, that some experimenters have used it in this condition without deleterious effects. Summing up the literature this remedy seems to be the best remedy out in the treatment of syphilis. He thinks that as this came about by animal experimentation the results obtained by the discovery will tend to suppress the anti-vivisectionists.

In closing Dr. Rhamy gave method of administering, and Dr. Weaver closed by saying that the hyperideal 606 is supposed to be one-third as toxic as original "606."

Meeting of November 15 annulled on account of Twelfth District Medical Society meeting on that date.

Adjourned.

J. C. WALLACE, Sec.

Meeting of October 25

Society met in regular session in the assembly room with thirteen members present. Minutes of previous meeting read and approved.

Dr. Porter presented specimen, enlarged prostate taken from man aged 71. Never had any trouble with prostate. Never used catheter. Twenty-four hours before coming into hospital was suddenly taken with retention of urine. Operation, suprapubic incision, removed prostate. Middle lobe size of horse-chestnut, and lateral lobes much enlarged. Upper posterior part shelled out very hard. Diagnosed malignant disease of prostate. Microscopic examination showed adenocarcinoma. Dr. Porter believes that if every prostate removed from old men was examined microscopically, a much larger percentage of carcinoma would be found than usually supposed. One out of every five or six prostates removed by him in last two years found to be malignant. Cases which are malignant are relieved for a long time, so that operation is warranted for relief afforded patient. A man with enlarged prostate should have same removed before he enters on catheter life, thus avoiding danger to kidneys and liability of malignant changes due to continued inflammatory changes.

Discussion by Drs. Barnett and Rhamy.

Dr. McCaskey reported a case of brain tumor. Patient, farmer aged 43. First symptom was a scalding sensation in throat, lasting a minute or two, supposed to be due to juice from pipe. Later symptom recurred oftener. Hemiplegic symptoms followed, and later pain developed in right frontal region above and

back of eye. Pain constant, though worse at times. No history of syphilis. Tenderness on pressure right frontal area. No Rhomberg. No ankle-clonus. Choked disc right side. Diagnosis—organic brain lesion. Advised hospital and K. I. grs. 60 t. i. d., and mercurial inunctions. Patient refused to stay at hospital and went home. Three days later suddenly died from hemorrhage of brain.

Dr. E. M. Van Buskirk read a paper on "Sources of Typhoid Infection," in which he said that typhoid should be considered an infection of the blood rather than of the intestines. Report of typhoid epidemic during Spanish-American War seemed to show that the water had but little to do with carrying infection. It is due rather to contact man to man, sometimes being due to failure to wash hands after being around typhoid case. Out-house responsible for dissemination of typhoid in various ways.

Discussion by Drs. Kane, McOscar, Weaver, McCaskey, Beall, and Porter. Closed by Dr. Van Buskirk.

The following resolutions were presented, and on motion were adopted:

WHEREAS, A bill, known as the Owen Bill, providing for a national department of public health, and with it the more efficient prevention and treatment of disease, is now pending before Congress, and,

WHEREAS, Because of its great value to the public health and welfare, such bill has received the endorsement of a large number of lay as well as medical societies, and

WHEREAS, There has been created an enormous opposition to such bill by the various proprietary and monied concerns interested in its defeat, therefore be it

Resolved, That the Fort Wayne Medical Society, through its Secretary, call upon each of the Congressional candidates for this district, and upon each of the Senatorial candidates for a definite expression of his stand upon said pending Owen bill.

Adjourned. J. C. WALLACE, Sec.

Meeting of November 8

Society met in regular session in Assembly Room with thirty-five members present. Minutes of previous meeting read and approved.

Dr. McCaskey made supplementary report of case of brain tumor reported some time ago. Operation had been made over Rolandie area, but did not locate tumor. Patient went home, and before his death there was bulging into site of operation wound. Tumor found in area of operation after patient's death. This was a case in which the tumor was of same consistency as the brain tissue.

Dr. McCaskey reported a unique typhoid case. History of sudden illness one night; sudden onset of pain in lower abdomen; high temperature for possibly two weeks; hemorrhage from bowels and suspected tuberculosis. Widal test positive. Eberth bacillus found on blood culture. Hemorrhage due to typhoid ulcerations.

The program of the evening consisted of a symposium on Poliomyelitis, L. T. Rawles discussing "Etiology and Contagiousness"; C. C. Kimmel, "Symptomatology and Diagnosis," and J. S. Boyers "Prognosis and Treatment."

In the discussion Dr. McCaskey said the term "anterior" should be dropped, as it is a general infection, and does not select the cells of the anterior cornua. All cases of poliomyelitis should be isolated. If serum preventive treatment becomes available then we may be able to prevent the development of the disease.

Dr. Weaver said leukopenia occurs early and should be mentioned. Early passive, and a little later active motion and massage are of advantage. Sachs says the sequelae depend very much on the activities of the physician.

Also discussed by Drs. W. D. Calvin, C. B. Steman, Drayer, Rhamy and Porter. Closed by Drs. Rawles, Kimmel and Boyers.

Dr. W. D. Calvin made motion, which was carried, that a committee of two be appointed to investigate possibility and advisability of having a car start from Fort Wayne to the A. M. A. meeting in 1911.

Adjourned. J. C. WALLACE, Sec.

DEKALB COUNTY

The DeKalb County Medical Society held its regular meeting December 1 at Auburn. Election of officers resulted as follows: President, Frank Broughton, Waterloo; vice-president, W. F. Shumaker, Butler; secretary-treasurer, D. M. Hines, Auburn; board of censors, W. F. Shumaker, J. E. Showalter and M. E. Klingler; delegate to Indiana State Medical Association (two years), F. M. Hines, Auburn.

Dr. Garrette Van Sweringen, of Fort Wayne, presented an interesting paper on "Toxemia of Pregnancy." Dr. B. Van Sweringen, councilor for the Twelfth District, was present.

The next meeting of the society will be held in Butler.

Adjourned. D. M. HINES, Secretary.

HUNTINGTON COUNTY

The Huntington County Medical Society met November 10. Dr. S. V. Wilking, of Roanoke, read a paper on Gastric Ulcer. Dr. Wilking reviewed the literature on the subject, and compared the two lines of treatment, that of feeding the patient within a few days with that of withholding food for a much longer period. He also discussed the modifications of these two lines of treatment. Dr. Wilking had presented a patient suffering from gastric ulcer before the society in March, 1910.

Adjourned. R. Q. TAVINER, Sec.

The society met in called session November 17 to take action regarding the death of the wife of Dr. W. C. Chafee, one of the oldest practitioners in the county. The society passed appropriate resolutions and ordered a floral design.

Adjourned. R. Q. TAVINER, Sec.

KOSCIUSKO COUNTY

The Kosciusko County Medical Society held the November meeting on the 29th instant. The following motion was made and seconded: "That as the state dues have been increased \$1.00, our county dues be increased \$1.00 to meet the extra state dues. Furthermore, that as the state does not retain a member whose dues are not received by February 1, that any member who fails to pay his annual dues by Feb. 1 shall be held as suspended without action on the part of the society." This being an amendment to the constitution, will not be voted on until the December meeting.

Dr. Clapp of Ligonier was a guest of the society. He presented a paper on "Pernicious Anemia." Dr. Leedy, Pierceton, read a paper on "Pernicious Anemia in Pregnancy." Dr. Anglin, Warsaw, was the essayist on the subject of "Broncho-Pneumonia in Children." Dr. T. J. Shackelford read a paper on "Spina Bifida, with Report of Cases." The discussion was entered into by Drs. McDonald, Yocum, Dubois, Bowser and Howard. A vote of thanks was tendered by the society to Dr. Clapp.

Adjourned.

C. NORMAN HOWARD, Sec.

MONTGOMERY COUNTY

September and October Meetings

The meetings for September and October of the Montgomery County Medical Society were very enthusiastic, and papers of more than ordinary interest were presented at each meeting. Dr. Greene's paper on "Foreign Bodies in the Orbit" gave some facts in relation to the capacity of the orbital cavity which were a surprise to many. He also reported a case in which the breech plug of a gun had been imbedded in the roof of the orbit for three years without being detected, although the eyeball had been enucleated at the time of the accident. It was diagnosed by the aid of a magnet, successfully removed, and weighed $3\frac{3}{4}$ ounces.

Two papers were read at the October meeting, one by T. J. Griffith, on "Vegetable Liver Stimulants," and "Conservative Gynecology" by Dr. Straughan, of Waveland. The papers elicited a warm discussion, Dr. Straughan advocating conservative measures in all cases where immediate operation was not imperative. The papers of Dr. Greene and Dr. Straughan were referred for publication in THE JOURNAL.

Adjourned.

J. L. BEATTY, Sec.

November Meeting

The regular meeting of the Montgomery County Medical Society was held in Crawfordsville November 22.

The paper of the evening was read by Dr. Swank, on the "Prevention of Typhoid Fever," the author taking up the phase of milk and water borne infection. He said that there is already enough known about typhoid fever, its cause and the methods by which it spreads from one person to another, to enable the zealous health officer to prevent almost every epidemic of the disease, if he can secure such hearty cooperation of the physicians as would guarantee the reporting of every suspected case early, instead of waiting until the disease is fully developed, and then only reporting it to avoid the penalty of the law. He pleaded for such early confidential reports of suspected cases as would enable the health officer to set forces at work for regulating the disease before it becomes an epidemic. He cited histories of various epidemics, illustrating them by charts and diagrams, to demonstrate how they might have been prevented if the doctors in charge had early done their full duty. The remaining time was spent in a discussion of the paper; the necessity of educating the people and physicians to a more prompt observance of existing law, and the need of better sanitation, being recognized.

Dr. Beatty said that the city of Crawfordsville, with its 10,000 people, has had but five cases of typhoid so far this year, two of them clearly contracted abroad. He urged that every precaution be taken along known lines of sanitation in order to keep up the good record.

Adjourned.

J. L. BEATTY, Sec.

PORTER COUNTY

October Meeting

Society met in regular session with President Take in the chair, October 3. Dr. Nesbit, of Valparaiso, read a paper on "The Ehrlich-Hata Preparation '606' in the Treatment of Syphilis." Dr. Young, of Valparaiso, who has recently returned from the Vienna clinics, gave a few remarks concerning his trip, which he illustrated with the stereopticon.

Adjourned.

G. R. DOUGLAS, Sec.

November Meeting

Society met in regular session November 7, with President Take in the chair. Dr. Young, county health officer, reported that State Board of Health were to send their tuberculosis exhibit to Valparaiso, and that they desired it to come under the auspices of the Porter County Medical Society. An invitation was extended the State Board of Health to bring the exhibit, and the city and county health departments instructed to make necessary arrangements.

Dr. Young, of Valparaiso, read a paper on "Uterine Fibromata" in which great emphasis was placed on the fact that 4 per cent. become malignant and 40 per cent. develop complications. The author stated that in early operation enucleation is frequently successful, but that hysterectomy is usually necessary. He said that uterine fibromata should ever be considered as requiring early surgical attention. The discussion brought out the fact that favorable results sometimes followed the use of chromium sulphate.

Adjourned.

G. R. DOUGLAS, Sec.

SPENCER COUNTY

The Spencer County Medical Society met in regular session with Dr. A. M. Bean, of Chrisney, November 15. Minutes of previous meeting read and approved.

Dr. Bradley reported two cases of endocarditis, of similar character, one of which died in a short time.

Dr. J. P. Coultas read a paper on "Constipation in Children," in which he emphasized the fact that the condition should be corrected as far as possible in babies by the proper food. The child should be placed on stool at an early age, and a regular habit established. He gave as causes, insufficient exercise, deficiency in fat in mother's milk, and too little sugar, carelessness in going to stool at regular time, and not enough water taken. He mentioned as helps in overcoming the condition, oatmeal water, orange juice, cod liver oil, nuxvomica, cascara compounds, and suppositories of aloin and belladonna (not too frequent). Discussion.

Adjourned.

H. Q. WHITE, Sec.

BOOK REVIEWS

AN EPITOME OF HYGIENE AND PUBLIC HEALTH. By George M. Price, M.D., formerly Inspector New York State Tenement Commission, Medical Sanitary Inspector, New York Department of Health. Cloth, \$1. net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

This one of the medical epitome series edited by Victor C. Pedersen, M.D., deals with the essential subjects classified under hygiene and public health. While

curtailed in many respects it is nevertheless a practical and readable treatise. A familiarity with the subject matter presented as it is in this concise form, will enable the practitioner to put into practice its many useful suggestions. It is also admirably adapted to preparations for state board and college examinations.

PRACTICAL TREATMENT. W. B. Saunders Company now have going through their presses a three volume work on Practical Treatment, written by international authorities and edited by those able clinicians, Dr. John H. Musser and Dr. A. O. J. Kelly, both of the University of Pennsylvania.

In looking over the list of contributors we can come to but one conclusion; namely, that this work will undoubtedly take rank as the very best on Treatment extant. The names of the authors carry with them the positive assurance of thoroughness. Indeed, each chapter is a complete monograph, presenting the most recent therapeutic measures in a really practical way.

As the general practitioner is required to know certain therapeutic measures more or less of a surgical nature, leading surgeons have been selected to present such subjects. This is an important feature, and, to our knowledge, not included in any similar work.

In every case the men have been most aptly chosen for their respective tasks, and under the wise editorship of Drs. Musser and Kelly there has been produced a work on Treatment that will remain for many years the last word—a source of practical information, easily obtained and readily digested.

The work will sell for \$6 per volume, in sets only.

A MANUAL OF OBSTETRICS. By A. F. A. King, M.D., Professor of Obstetrics and Diseases of Women in the Medical Department of the George Washington University, Washington, D. C., and in the Medical Department of the University of Vermont, etc. Eleventh edition, enlarged and thoroughly revised. 12mo., 713 pages, with 341 illustrations and three colored plates. Cloth, \$2.75, net. Lea & Febiger, Philadelphia and New York, 1910.

This well known manual of obstetrics in its eleventh edition follows essentially the plan of former editions. It presents in an easily intelligible form the rudiments and essentials of obstetrics and forms a convenient outline of the groundwork for the student from which he may be better prepared to understand and assimilate the knowledge acquired from fuller textbooks.

It is also a ready reference for busy practitioners who wish to refresh their minds upon the more essential points of obstetric practice. Additions to the volume cover pubiotomy, spontaneous version by posture, and the influence of thigh pressure upon the abdomen as an auxiliary force in labor.

The chapter on hyperemesis has been rewritten and a number of new illustrative plates have been added.

The practical utility of this volume has been demonstrated beyond question, and there is no doubt that its usefulness will continue to be appreciated in this new edition.

THE PRACTICE OF MEDICINE. A Guide to the Nature, Discrimination and Management of Disease. By A. O. J. Kelly, M.D., Assistant Professor of Medicine, University of Pennsylvania; Professor of Medicine, University of Vermont. Cloth, \$4.75, net. Lea & Febiger, Publishers, Philadelphia and New York, 1910.

Appreciating the fact that the great mass of knowledge in the practice of medicine is too often placed before minds not yet qualified to discriminate the order

of importance of facts and grasp their inter-relationship, the author has attempted to determine what is really essential and to present a volume that will be comprehensive, properly balanced and in good perspective.

The general plan of the work is a division into twelve sections and these in turn are subdivided to cover disease of individual organs and diseases due to various micro-organisms. Particular attention is given to diagnosis, prognosis and treatment, the latter including at least one specific method of treatment, together with medical formulæ which are known to be of value. Biologic characteristics of the micro-organisms and technic of laboratory methods of diagnosis are omitted in this volume. Tropical diseases are treated of briefly but clearly because of recent widespread interest, and for the benefit of those who go to practice in tropical countries.

Being the work of a very able man and one who is thoroughly prepared for writing a modern practice of medicine, this book will prove of invaluable assistance to the student and junior practitioner in solving many of the perplexing problems presented to them. The specificity with which treatment is given and the intelligent discrimination with which important facts have been selected, are especially commendable.

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart A. Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, etc. Vol. iii, September, 1910. Paper. Pp. 338. Price \$6 per annum. Lea & Febiger, Philadelphia and New York.

This number is composed of discussions of "Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood-Vessels," by Ewart; "Dermatology and Syphilis," by Gotthel; "Obstetrics," by Davis; and "Diseases of the Nervous System," by Spiller.

Considerable space is given in the first section to a consideration of the pretuberculous states and the pathway to infection by the bacillus of tuberculosis. Under diseases of the blood-vessels much space is devoted to a review of Adami's excellent article on "The Nature of the Arteriosclerotic Process." As for treatment of conditions of hypertension one is somewhat surprised to see the scant attention given the beneficial effects of the daily sweat bath, probably the most effectual means at our disposal at the present. Leonard Hill's new portable mercury sphygmomanometer is described and illustrated, as is the new self-recording instrument demonstrated by Singer.

As usual Gotthel's section is well done. He advocates the use of the demonstration of the spirochete and the Wassermann test as diagnostic factors of the highest importance in syphilis. The injection treatment he believes to be gaining ground. Ehrlich's "606" is not discussed.

Davis' section on "Obstetrics" is exceedingly interesting, and much space is devoted to obstetric surgery. Under diseases of the new-born, one finds no mention made of the continued good results from blood transfusion in the treatment of melena neonatorum.

A very interesting part of Spiller's section is his opening discussion on brain tumors.

All told the number is thoroughly up to the usual high standard of this publication.

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